Notebook, N-04-11-22

04-11-22

1558

[illegible] 22/04

7

4419 — 5

Soaked in the 33% of 18 hrs.
before putting on —

4423	553	469	532	458	528	533	527
22	590	486	549	437	519		
21	615	479	537	460	530	542	530
20	[illegible]	474	513	457	533	537	520
19	[illegible]	467	529	487	529	532	521
	604	475	532	459.8	527.8	536	

4423	526	
22		
21	531	538
20	526	532
19	523	530

52 runs on Endurance

	61	63	64	50 runs on Endurance	116	117
4421	530	522	518		538	500
20	533	508	515		525	488
19	533	512	517		527	493

4423	472	488	460	458	422	422	407	367
22	454	516	515	505	517	517	517	515

Nov 22 1904 Dows

4419 - Group 5 nickels Reversed Perforation
CHARGED in 33% 150 [illegible] 15 hours
against CP Nickel strip 100 rate, then
put in 21% and charge 15 hours [illegible] rate
disch 100 - use new [illegible] cathodes
Center 92 Edge 100 + 103

4420 Dup of 4419
Center 88 Edge [illegible] 101

4421 " "
Center 93 Edge 103 + 103

4422 " "
Center 92 Edge 103 + 107

4423 " "
Center 89 Edge 97 + 103

[illegible]
[illegible]

4428	580							
27	580	443	514	442	511	515	517	492
26	583	461	520	442	518	522	517	508
25	578	443	520	440	518	523	504	517
24	567	460	530	455	527	532	521	517
					518.5	523		518

4427	517		50 runs on endurance	41	43	44	50 runs on endurance	116	117
26	520	x		530	500	483		517	483
25	517	x		543	504	500		522	487
24	523	x		543	512	497		533	498

	"							
4427	452	450	433	400	348	343	310	300

No 7

Nov 22 1904 Done

4424 Group 5 nickels reversed perforations
CHARGED in 21% 15 hours, 100 rate,
Temp 150 Fahr – Then charge in 21%
Cold - 15 hours, dischg 100, use new
Cathoded irons –
Center 92 – Edge 101 + 103

4425 Dup of 4424
Center 92 Edge 101 + 103

4426 " "
Center 92 Edge 102 + 103

4427 " "
Center 89 Edge 101 + 101

4428 " "
center 90 edge 101 + 102

4431	30	478	462	472	408	463	480
4430	39	500	500	476	408	446	468
4429	97	442	446	440			5C
		473	476				

3 | 1420
473

3 | 1428
476

Nov 22 1904 Line E

4429 3 cups from Gibbs Truck Soaked 5 days in concentrated Bicarbonate Potash till green crystals appeared on outside of cups stuck thereto. Charge in 21% 15 hours 200 rate discharge 100 rate
Center [illegible] Edge 96 & 96

4430 Dup of 4429
Center 87 Edge 100 & 103

4431 " "
Center 88 Edge 100 & 101

Soaked 18 hrs. in the 33 o/o before putting in —

4436	242	249
35	240	263
34	267	299
33	253	309
32	253	270
	251.6	278

Nov 22 1904 Dows

4432 Group of 5 reversed perforations containing 3.2 green nickel hydroxide CHARGED in 33% 15 hours 100 rate 150 Fahr then put in cells with 21% and new cathoded irons and charged 15 hours 200 rate dischgd 100

Center 103 Edge 116 & 117

4433 Dup of 4432

Center 101 Edge 112 & 117

4434 " "

Center 99 Edge 111 & 114

4435 " "

Center 100 Edge 115 & 116

4436 " "

Center 105 Edge 114 & 118

4441	228	248
40	257	282
39	[illegible]	296
38	232	292
37	278	302
	245.2	284

Nov 22 1904 Dons,

4437 Group 5 Ni Reversed perforations 3.2 green nickel hydroxide, soaked in 33% in bottle on hot plate down stairs 40 hours, Then put in 33% + CHARGED against CP nickel strip 15 hours 100 rate 150 deg Fahr Then assemble with cathoded irons and charged 15 hours 200 rate disch 100

Center 103 Edge 114 + 117

4438 Dup of 4437
Center 103 Edge 117 + 117

4439 " "
Center 102 Edge 114 + 117

4440 " "
Center 101 Edge 112 + 115

4441 " "
Center 101 Edge 113 + 115

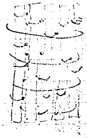
Soaked [illegible]
before [illegible]

4446	630	464	438	427	372
45	700	527	492	470	442
44	522	388	367	345	320
43	593	464	426	392	382
42	700	527	482	438	422

Nov 22 1904

4442 5 Regular pockets from Glen Ridge bound together with fine iron wire bars and connected to a CP nickel strip. Charged in 33% 150 Fahr 15 hours, 100 rate then put all together in another jar with 21% and charged further against Ni strip 15 hours 200 rate then ~~take apart~~ ~~them~~ ~~[illegible]~~ ~~jar water [illegible]~~ ~~Take apart [illegible] then assemble each~~ Take them apart & put Each in a grid but do not press or Corrugate them, assemble in Cells with Collodion irons & disch at 100 rate

Leave wires between for circulation



4443 Dup of 4442

4444 " "

4445 " "

4446 " "

5 nickels

			2550.	2358	2471	2308	2571	2583
2458	2408	2584	2375	2391				

Nov 22 1904 Done

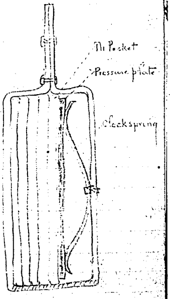
4447 Make a Cage of Regular nickels pressed in the flat die to make them perfectly flat, put 5 in the cage with clock spring pressure same with Irons These are to be ~~[illegible]~~ CHARGED in 33% the nickel only. 150 Fahr 100 rate for 15 hours, The irons are to be charged 15 " 200 rate in 21% then both cages are to be put Together in 21% & Charged 15 hours more at 200 rate; dischgd 100 rate

~~4448 Dup of 4447~~

~~4449 "~~

~~4450 "~~ "

~~4451 "~~ "



4452	423	423	408
51	496	492	486
50	412	412	393
49	461		447
48	445	/	447

C

✓ Nov 22 1904 Done

4448. 5 gibbs pockets soaked in water 2 hours after they were changed in big plate. The pockets put in grids not pressed - but sides tightened to make contact with grids and given to Edison to soak in 21% sol Sat. Iodide of potassium, 3 grams for 24 hours Then put in large quantity water warm soaked 20 hours, then put with cathodes & normal chgd 21% - 15 hours 200 rate, dischg 100 -

Center 96 Edge 102 + 105

4449 Dup of 4448
Center 98 Edge 101 + 104

4450 " "
Center 94 Edge 100 + 104

4451 " "
Center 100 Edge 108 + 111

4452 " "
Center 97 Edge 102 + 104

4453	147	276	222	
54	164	245	220	C 6
55	143	260	220	
56	143	233	236	
57	143	238		

Nov 25 1904 [illegible]

4453 5 nickels. 21% Electrolyte
Containing 3 grammes Aluminum
in the Tumbler dissolved in the ROH,
Charge 15 hours 200 discharge 100
Center 92 Edge [illegible] 101

4454 Dup of 4453
Center 95 Edge 103 + 105

4455 " "
Center 94 Edge 100 + 103

4456 " "
Center 92 Edge 102 + 104

4457 " Center 87 " Edge 99 + 102

[illegible] in the 33 o/o
[illegible]

4462	330	240	307	347	352	342	348
61	351	271	373	377	388	373	378
60	391	318	427	435	433	425	7
59	63	308	417	425	429	421	428
58	400	316	416.	419	427		418
	368	291	388	400	406	390	393

	50 mins on endurance	60	62	63	50 mins on endurance	115	116
4461		377	367	367		355	333
59		S.C.	S.C.	432		448	430
58		433	432	432		391	395

Nov 25 1904 Lime

4458 – 5 Reg Ni Charged 15 hrs in 33% 150 Ifalv 100 rate, the KOH, Containing 3 grammes of Metallic Aluminum – Then put in 21% 07 Chge 200 rate 15 hours dischg 100 rate
Center 58 Edge 100 – 99

4459 Dup of 4458
Center 91 Edge 100 + 104

4460 " "
Center 91 Edge 100 + 104

4461 " "
Center 87 Edge 98 + 94

4462 " "
Center 91 Edge 101 + 10[illegible]

S

4467	32	525	552	532	483	367	502
66	37	497	542	522	533	527	518
65	37	493	537	513	532	525	507
64	0	550	565	540	527	400	533
63	33	508	545	518	540	532	543
		514	544	525	523		

4467	538	525	520	554	525	532	533	528
66	515	497	520	542	520	524	527	533
65	505	493	513	538	518	522	523	532
64	527	550	528	525	512	514	515	527
63	532	510	528	545	532	530	SC	530
				540				538

	50 runs on Endurance	67	69	70	50 runs on endurance	122	123
4465		567	533	540		563	540
64		578	540	533		556	528
63		S.C.	400	555		572	548

107

4463 —	97 —	103
64	100	108
65	92	98
66	97	97
67	97	92

Nov 25 1904 [illegible]

4463 5 nickels put in 21% & charged ~~disch~~ 200 rate 15 hours disch 100 — KOH Containing 3 grammes Cyanide Potassium Reg irons to be charged 24 hours at 200 before putting in cell with nickel

Center 89 Edge 9[illegible]

4464 Dup of 4463

Center 91 Edge 95 + 114

Soaked 4 days in Solution

4465 " "

Center 94 Edge 99 + 101

4466 " "

Center 91 Edge 9[illegible] + 1[illegible]

4467 " "

Center 90 Edge 91 + 102

4472	375	515	530	515	518	507	533
71	440	495	527	507	516	500	533
70	~~482~~	515	553	518	525	517	533
69	420 436	513	533	510	[illegible]		sc
68		503	525	507	513		533

4772	507	522	507	512	522	513		57 runs on Endurance
71	503	518	505	507	517	513		
70	512	527	517	516	527	518	x	
69	SC	out 522	SC	SC	502	514	x	
68	507		517	508	525	517	x	
					516	515		

	65	67	68		120	121	
4470	582	533	528	50 runs on Endurance	547	523	Endurance
69	533	523	523		553	523	
68	565	533	523		553	S.C.	

No 7

Nov 25 1904

4468 5 nickels put in 21%
Chgd 200 dischg 100 15 hours, KOH,
Containing 3 grammes Hyposulphite of
Soda + Kept wires to be charged
24 hours before putting in cell with
nickel Center 87 Edge 97 + 100

4469 Dup of 4468
Center 92 Edge 101 + 104
Soaked [illegible] days in Solution

4470 " "
Center 93 Edge [illegible]

4471 " "
Center 90 Edge 100 + 10[illegible]

4472 " "
Center 90 Edge 100 + 103

4477	7	160	130	100	95		
76	22	213	180	135	120	100	108
75	55	175	153	137	93	72	63
74	27	196	158	108	85	72	52
73	63	225	195	162	160	127	133

4477							
76	92	87	50	300	367	403	385
75	65	57	258	267	~~[illegible]~~ 328	362	343
74	65	52	[illegible]	[illegible]	[illegible]		
73	116	113	307	313	400	427	408
			after Reversed	2nd after Rev-			

Nov 25 1904 Cont

4473 5 Reg Nickels - 21%
Charge 15 hours 200 rate / dischg 100
KOH Containing 3 grammes
Iodide of sodium - Reg irons -
to be charged 24 hours before putting
in cell with nickel — when through
with these group throw irons away
Center 95 Edge 103+105

4474 Dup of 4473
Center 91 Edge 100+101

4475 " "
Center 92 Edge 100+104

4476 " "
Center 92 Edge 102+102

4477 " "
Center 92 edge 103+103

4482	442	532	533	533	527	511	512
81	432	508	532	517	513	510	512
80	447	507	528	510	517	497	506
79	[illegible]	505	518	512	517	497	507
78	460	507	528	506	515	496	505

							63	65	66
4482	513	497	513	500	x	50 runs on endurance	565	533	527
81	511	500	512	505	x		575	515	527
80	500	495	495	477	x		555	530	520
79	500	492	494	452					
78	503	490	492	490					
				487					

		118	119
4482	50 runs on endurance	558	522
81		565	523
80		545	516

107

Done Nov 25 1904

4478 5 Reg Ni charged 200 rate 15 hours disch'g 100 in 21% cobalt has been tickled with filter paper Iron to be charged 24 hours before nickel put with it —

Center 88 Edge 100 & 102

4479 Dup of 4478
Center 88 Edge 90 & 101

4480 " "
Center 88 Edge [illegible]

4481 " "
Center 91 Edge [illegible]

4482 " "
Center 90 Edge [illegible]

4487	455	508	517	513	517	500	505
86	442	510	532	518	525	507	508
85	448	463	530	512	523	510	510
84	456	520	530	515	522	510	512
83	457	512	530	514	522	510	513

						52 runs on endurance	63	65	66
4487	500	488	497	492					
86	507	492	537	492					
85	507	492	498	495	x		567	533	525
84	510	497	502	503	x		573	530	502
83	510	497	497	498	x		567	535	523
				496					

	50 runs on endurance	118	119
4485		557	522
84		568	527
83		597	515

No 7

Done Nov 25 1904

4483 5 Reg Ni ~~[illegible]~~ charged 15 hours 200 rate in 21% KOH, which has been boiled with filter paper, ~~was~~ now charged 24 hours before filling with nickel. The Electrolyte to have 2 grammes of finely precipitated flake no oxide put in —

Center 89 Edge 100 & 102

4484 Dup of 4483
Center [illegible] Edge [illegible]

4485 " "
Center 89 Edge 100 & 104

4486 " "
Center 89 Edge 101 & 101

4487 " "
Center 89 Edge 101 & 102

4492	457	444	462
91	441	432	446
90	486	476	486
89	395	490	500
88	475	[illegible]	467
	451	462	472

Done

4488 = 5 pockets from Charged Gibbs Cell grid, soaked 10 ~~24~~ hours 2% Containing Hyposulphite Soda 3 grms 1+ then soaked in water 40 hours, Then peel with Irons previously Charged 24 hours Chg 15 hours Rec rate about 100 when through with this group throw away
Center 101 Edge [illegible] 106

4489 Dup of 4488
Center 100 Edge 111+112

4490 " "
Center 97 Edge 103+105

4491 " "
Center 97 Edge 106+111

4492 " "
Center 95 Edge [illegible]+103

~~4497 | 465~~
~~96 | 476~~
~~95 | 433~~
~~94 | 542~~
~~93 | 497~~

	1st	2nd		
4497	462	485	473	483
96	460	476	465	470
95	433	433	425	433
94	520	542	533	544
93	488	497	485	500
	[illegible]	486	[illegible]	486

Dots

4493, 5 pockets from charged grid Gibbs Cell - Soaked 1½ hours Cyanide potassium 3 grams in 2½ KOH, Then soaked water 40 hours & pail with charged wood & Chgd 15 hours 200 rate disch 100 — When through with the group throw the irons away
Center 95 Edge 100+102

4494 Same as 4493
Center 99 Edge 104+108

4495 "
Center 93 Edge 99+100

4496 " "
Center 93 Edge 100+104

4497 " "
Center 99 Edge [illegible]+100

4498	588	569	607	778	729	767	823
4499	825	[illegible]	[illegible]	775	692	727	

Harmanygramme

Done

#4498.

#2182 Jwa. 7 & 3 graphite ff mix
Pref in vac, in 33% K.O.H.
charge + run reg in clamp -
device between 2 reg Fe's..

Cells 96 [illegible] 102-108

4503	325	267	209	×			
02	265	215	153	110	82	65	49
01	272	225	175	125	85	66	54
4500	255	199	141	87	60	45	37
4499	308	263	216	162	125	97	76

4503		
02	42	30
01	47	32
00	32	20
99	65	53

Done

4499- 5 nickels charged in 21% Containing in the ~~Cell~~ solution [illegible] grams of Aluminium Charge 15 hours at 200 mils discharge rec [illegible] use Cathodeal irons — LO Run through with this group throw irons away

Center 92 Edge 103+104

4500 Dup of 4499
Center 94 Edge [illegible]

4501 " "
Center 92 [illegible] 102+[illegible]

4502 " "
Center 91 Edge 102+105

4503 " "
Center 90 Edge 100+102

4508	483	486	492	493	485	495
07	477	475	475	477	483	442
06	480	487	492	493	482	477
05	480	479	487	483	490	477
04	470	493	483	477	491	466

4508	477	477
07	480	479
06	482	492
05	482	487
04	482	[illegible]

Not all of the Zn was dissolved
a little fell off the Pt wire - W.E.M.

Done

4504 = 5 nickels ~~charged~~ w/ 21% Containing one gram of CP Zinc, dissolved, have given fix it by dissolving electrically. Then charge 200 rate 15 hours, discharge 100 rate, use Cathodical irons, when through with this group throw none away
Center 93. [illegible] 102+[illegible]

4505 Dup of 4504
Center 92 edge 101+[illegible]

4506 " "
Center 88 edge 100+101

4507 " "
Center 92 edge 100+104.

4508 " "
Center 92 edge 103+105

4513	268
12	408
11	340
10	205
09	425

Done

4509 - 5 Reg nickels charged in cell 21% ~~containing in tumbler~~ three ③ grammes of oxide of lead dissolved Charge 15 hours 200 rate, dischg 100 rate use Cathoded irons when through with this group throw the irons away

Center 90 Edge [illegible] + 104

4510 Dup of 4509

Center 91 Edge 99 + 99

4511 " "

Center 90 Edge 97 + 102

4512 " "

Center 92 Edge 102 + 104

4513 " "

Center 88 Edge 101 + 102

4518	638	587	593
17	643	592	608
16	646	596	613
15	655	577	610
14	642	567	602

Done

4514 5 Reg nickels charged in 33% 150 Fahr 15 hours at 100 rate, put in Cell 21% & Chg 15 hours 200 rate. charge 100 rate. Then ~~put back in heater until~~ oil 150° F 33% or Charge again, running in 21% & so on until further orders

Center 91 Edge 102 + 105

4515 Dup of 4514

Center 91 Edge 101 + 103

4516 " "

Center 92 Edge 101 + 102

4517 " "

Center 90 Edge 101 + 102

4518 " "

Center 90 Edge 102 + 105

4523	500	508	494	488	495	487	485
22	500	506	495	490	493	487	483
21	495	506	495	490	492	488	486
20	495		7[illegible]	started with 70			
19	485	485	453	467	462	457	459

4523	487	481	475	488		482	484	x
22	487	475	467	488	483	484	484	x
21	487	477	467	488	483	483	483	x
20	assembled wrong				—			
19	455	442	433	433	433	455	458	

52 runs on Endurance

4520 [illegible] less than 1 volt on discharge and only runs a few minutes. W.E.H.

	65	67	68	50 runs on endurance	121	122
4523	533	515	498		528	484
22	525	500	498		520	477
21	520	500	498		523	481

Done

4519 5 nickels the cups of which have been thinly plated with iron
Charge in 21% 15 hours 200 rate
disch 100
Center 86 Edge 98 & 100

4520 Dup of 4519
Center 89 Edge 101 & 104

4521
Center 89 Edge 100 & 103

4522
Center 92 Edge 102 & 104

4523
Center 90. Edge 95 & 102

4528	413	522	522	518	508	532
27	498	529	526	529	517	535
26	512	524	524	527	508	525
25	173	516	525	527	512	532
24	521	524	506	527	500	525
		523				

								03	05	06
4528	515	508	490	499	500		50 runs of Endurance			
27	518	513	500	505	505					
26	510	507	492	493	500	x		533	515	500
25	516	508	486	500	500	x		575	527	522
24	512	507	500	497	501	x		545	527	497
					501					

		118	119
4526	50 runs of Endurance	500	500
25		552	510
24		548	507

5)2615
523

107

Done

4524 5 nickels the caps of which are plated very thin with silver put in 21% Chg 15 hours 200 rate discharge 100 —
Center 89 Edge 102 + 102

4525 10 up of 4524
Center 90 Edge 102 + 103

4526 " "
Center 90 Edge 101 + 103

4527 " "
Center 92 Edge 102 + 104

4528 " "
Center 90 Edge 101 + 103

4529	507	508	522	531	518	533
30	510	506	525	518	509	528
31	507	508	514	527	512	532
32	507	509	518	527	513	533
33	518	512	518	527	513	533
	510					

							63	65	66
4533	511	512	497	508	507	50 times Endurance			
32	516	503	490	498	500				
31	517	511	487	492	500 x		567	520	520
30	517	503	487	500	500 x		545	528	508
29	513	517	500	510	512 x		580	533	525

		118	119
4531	50 times Endurance	543	510
30		545	510
29		570	528

5)2519
504

507

5)2549
510

Done

4529 5 nickels the cups of which are plated very Thin with Cadmium. put in 21% Chg 15 hours 200 rate dischg 100
Center 93 Edge 108 + 107

4530 Dup of 4529
Center 91 Edge 102 + 103

4531 " "
Center 95 Edge 100 + 105

4532 " "
Center 89 Edge 101 + 102

4533 " "
Center 90 Edge 101 + 104

4538	498	505	511	515	508	508
37	506	515	526	529	515	513
36	490	508	510	522	502	520
35	499	505	512	522	502	513
34	497	505	513	520	502	515
	498	507	514	521		

4538	512	490	484	500	483	492	500
37	531	530	503	525	505	512	513
36	517	503	487	516	495	500	500
35	516	503	490	515	493	498	501
34	516	504	488	[illegible]	490	494	500
				515			503

	52 runs of endurance	65	67	68	50 runs of endurance	120	121
4536		553	520	520		537	505
35		560	532	518		558	519
34		542	529	520		542	506

107

[illegible]

4534 5 nickels plated very thin with Copper, Run in 21% Chg 15 hours 200 rate dischg 100 rate,
Centre 90 edge 100+103

4535 10 up of 4534
Centre 88 edge 100+102

4536 " "
Centre 89 edge 102+102

4537 " 92 " 103+105

4538 " "
Centre 89 edge 99+104

~~4538~~	~~498~~
~~37~~	~~506~~
~~36~~	~~490~~
~~35~~	~~499~~
~~34~~	~~497~~

4542		487	494
4541	447	480	488
40	453	487	488
39	443	474	486
38½	450	480	486
	448	481	488

Done

4538½ 50 Fifty Nickels made up in little grid 3.2. and put in big bottle down on the heater 144 Fahr + glass stopper put in loose leaving only just enough vent for gas so KOH will not Carbonate, Use 21% KOH, = Once each week Take out 5 a charge 15 hours 200 rate clock @ 100, use Carbonized iron

Center [illegible] Edge 99 + 101

First lot.

4539 Dup of 4538
Center 95 Edge 102 + 103

4540 "
Center 94 Edge 98 + 98

4541 "
Center 90 Edge 101 + 102

4542 "
Center 89 Edge 98 + 99

4547	442	447	477	487	497	491	
46	433	443	465	475	473	467	
45	442	445	477	475	488	482	
44	446	467	~~480~~	482	[illegible]	498	
43	439	453	482		[illegible]	500	
	440						

2nd Lot

Done

4543
Center 95 Edge 105 + 102

4544
Center 95 Edge 102 + 101

4545
Center 97 Edge 102 + 100

4546
Center 94 [illegible] 103 + 102

4547 Center 94 Edge 103 + 103

4552	392	440
51	415	467
50	415	442
49	416	470
48	420	474

3rd Lot

Done

4548
Center 94 Edge 103 & 102

4549
Center 94 Edge 101 & 102

4550
Center 92 Edge 99 & 101

4551
Center 94 Edge 102 & 104

4552 Center 91 Edge 99 & 100

4557	367	417	457	467	472	475	485
56	367	447	492	476	482	487	500
55	339	445	SC	SC	427	448	408
54	392	437	491		488	487	490
53	392	450	467	473	483	482	485

4557	512	462	467	442	455
56	522	483	487	476	500
55	433	392	388	367	400
54	514	472	470	467	473
53	500	461	460	450	453

4th Lat.

Dome

4553
Center 93 Edge 101 + 103

4554
Center 90 Edge 100 + 101

4555
Center 93 Edge 98 + 99

4556
Center 93 Edge 98 + 99

4557
Center 92 Edge 101 + 105

4562	395	458	475	482	486	498	472	467
61	377	449	475	484	486	500	475	s.c.
60	379	447	467	479	477	498	482	497
59	378	440						
58	367	433	450	469	467	480	472	485

4562	456	467	438	433	445	400	395
61	s.c.	—	262	530(?)	500	481	492
60	490	497	492	483	498	477	485
59	—	—	—	—			
58	475	483	476	467	480	460	467

5th

Done

4558
Center 94 Edge 99 + 100

4559
Center 88 Edge 101 + 100

4560
Center 94 Edge 102 + 103

4561
Center 94 Edge 99 + 102

4562

Center 94 Edge 102 + 100

4567	467	476						
66	468	467	438	445	431	433	411
65	467	408	433	445	433	433	411
64	460	473	464	483	482	488	482
63	490	482	459	482	482	492	487

67		478	478	487
4566	400	408	388	353
65	400	407	367	362
64	477	482	442	467
63	483	491	477	487

6th Lot

Done

4563
Center 96 Edge 104 + 103

4564
Center 90 Edge 103 + 101

4565
Center 90 Edge 99 + 101

4566
Center 90 Edge 95 + 96

4567 Center 92 Edge 100 + 100

4572	368	465	478	494	506	498
71	378	455	478	498	515	513
70	378	458	467	492	506	498
69	394	467	485	508	517	517
68	380	458	467	485	507	504

4572	500	487	500	467	476
71	523	513	522	488	489
70	500	477	465	400	400
69	525	513	525	495	500
68	500	497	506	467	480

7th Lot

Done

4568
Center 90 Edge 103 & 101

4569
Center 90 Edge 102 & 104

4570
Center 93 Edge 100 & 100

4571
Center 94 Edge 103 & 101

4572
Center 94 Edge 100 & 101

4577	347	432	437	457
76	367	444	453	477
75	373	454	458	477
74	367	441	444	472
73	373	459	464	485

8th Lot

Dens

4573
Center 91 Edge 103 + 104

4574
Center 93 Edge 98 + 102

4575
Center 94 Edge 102 + 102

4576
Center 92 Edge 102 + 101

4577 Center 90 Edge 101 + 103

4582	343	383	375	365	339	333	328
81	400	467	480	467	447	519	422
80	382	450	478	482	480	492	492
79	367	447	455	447	422	410	390
78	367	383	390	353.	340	333	325

4582	333	327	333	337	340
81	428	415	433	428	423
80	500	483	514	508	477
79	387	367	400	383	375
78	322	293	303	299	283

C.O.

9th Lot

Drier

4578
Center 96 Edge [illegible] 105

4579
Center 90 Edge [illegible]

4580
Center 92 Edge 99 + 101

4581
Center 94 Edge 102 + 100

4582
Center 90 Edge 101 + 103

4586½	382	457	485	483	500	503
86	358	268	472	443	455	443
85	367	457	492	492	513	518
84	390	467	498	495	514	513
83	382	442	462	422	423	423

4586½	467	467	498
86	400	400	490
85	489	510	517
84	477	467	500
83	382	367	367

C.O.

10th Cast

Dam

4583
Cent. 94 Edge 104 & 103

4584
Center 92 Edge 101 & 101

4585
Center 91 Edge 103 & 103

4586 –
Center 93 Edge 100 & 108

4586½
Center 94 Edge 100 & 101

	1	2	3	4	9	50 runs on Endurance	61
4587	570	573	575	556	[illegible]		612
88	569	578	572	558	580		648
89	570	582	579	563	582		650

	63	65	50 runs on endurance	116	117
4587	600	580		653	647
88	600	590		643	609
89	577	600		640	602

Done 11/27/84

4587.

Cal - $\frac{c}{121}$ $\frac{e}{120}$ $\frac{e}{116}$

3.84 gram #2182 flva = 2.56 $Ni(OH)_2$
= reg amount Ni for 3.2.
Grid made in reg cups
Pressed at 100 smooth 100 corrug-
in Goddards concavo-convex
dies. Stuff loaded in outside cup.
The inside cup being concave-
Put in 21% KOH + charge reg with
two reg chd Fe's.
Run 3 times reg 100 rate. + 3 times 500 rate
+ set aside for endurance -

#4588.

Dup of 4587.
Cal. $\frac{c}{122}$ $\frac{e}{118}$ - $\frac{e}{118}$

#4589.

Dup of 4587.
Cal - $\frac{c}{122}$ - $\frac{e}{120}$ - $\frac{e}{117}$

	1	2	3	8	9	5 runs on Endurance	61
4590	505	522	522	506	519		567
91	512	527	528	517	530		558
92	515	526	525	517	527		594

	63	64	5 runs on Endurance	116	117
4590	531	520		557	517
91	543	542		573	532
92	533	530		547	509

Done

4590. 11/27/04

3.2 grm. #424 Reg Ni mix.
Cups with reverse perforations of
reg strip Ni plating (cups were washed by HCl + KOH.)
Goddards concave convex cups -
Inside cup loaded in reg way -
Pressed 100 - 100.
Cal. $\frac{c}{102} - \frac{c}{96} - \frac{c}{99}$.
Run reg in 21 % against 2
charged Fe's.
Run 3 times at 100 Rate.
+ 3 " " 500 " + set aside
for small endurance -

#4591

Dup of #4590
Cal $\frac{c}{102}$ $\frac{c}{98}$ $\frac{c}{98}$.

#4592.

Dup of 4590
Cal $\frac{c}{101}$ $\frac{c}{97}$ $\frac{c}{97}$

Results under 157 B

4593 = Cup from 157 endurance
treated with Na Iodide 24 hours
in cell, With 21% KOH in — then
Changed KOH, + soaked another
24 hours, then changed KOH,
Charge 15 hours 200 rate
disch'g 100 rate, ~~[illegible]~~
went bad worse than before —
Reversed it 15 hours 200 rate hot
in 21% Came way up 327 I think
We now reverse it again hot
150 Fahr 15 hours 100 rate Y think
to see if Could get it higher still
Dec. 2 = 407 — did not use strip but
Reg iron as Anode in reversing —

~~4598~~	1	9 hr chg 2	3	4	5	6
4598	487	503	473	493	492	497
97	473	483	476	500	496	500
96	488	493	471	490	490	489
95	480	486	474	500	496	500
94	497	473	476	493	492	497

	7	8	9	10	11	12
4598	506	487	485	497	472	477
97	511	492	490	505	485	482
96	497	493	480	488	473	466
95	510	500	479	505	487	482
94	500	487	475	505	487	474

	13		53 runs on endurance	65	67	68	50 runs on endurance	120	121
4598	485								
7	490								
6	474	x		542	500	500		537	483
5	491	x		558	530	522		553	504
4	486	x		550	517	500		549	493

107

Done

Center 87 Edges 97 & 100

4594 Group of 5 Reg nickels assembled with iron pockets which has no mercury in the black mix, we have a bottle of it here — Charge 15 hours 200 rate disch'g 100 rate 21%

Charge the iron 15 hours 200 rate before assembling with nickels —

4590 Dup of 4594
Center 91 Edge 101 & 103

4596 " "
Center 90 Edge 99 & 99

4597 " "
Center 88 Edge 99 & 99

4598 " "
Center 91 Edge 100 & 103

	1	2	3		4	5
4603	553	450	497	~~527~~	488	465
02	650	575	561	~~527~~	550	377
01	633	580	565	~~523~~	540	547
00	625	543	538	~~526~~	537	532
4599	282	225	240	~~532~~	232	235

	6	7	8	9	10	11
4603	466	452	455	467	470	453
2	533	540	537	533	553	540
1	529	528	530	525	530	532
0	522	525	522	543	520	522
4599	220	207	200	189	183	200

	12			64	66	67		119	120
4603	455	x	52 runs of Endurance	488	450	434	50 runs of Endurance	486	467
02	545	x		417	543	532		553	532
01	533	x		565	543	522		498	525
00	530								
4599	188								

107

Done

4599 Group of 5 nickels CHARGED in 33% 1507 [illegible] 100 rate 15 hours and assembled with Black iron containing No Mercury which have been previously charged 15 hours 200 rate — Then Recharge Cell 15 hours 200 rate 21½ discharge 100

Center 84 Edge 96+98

4600 Rep of 4599
Center 91 Edge 102+104

4601 " "
Center 90 Edge 99+102

4602 " "
Center 86 Edge 99+101

4603 " "
Center 91 Edge 102+102

4608	57	177	256	247	250
07	57	170	250	237	260
06	132	227	303	293	278
05	125	205	272	266	266
04	113	182	220	214	233

Dave

4604 Group of 5 nickels green oxide ground to pass 100 mesh 3.2 no grafite, put in bottle with 33% a soaked 48 hours down stairs on hot plate, then assembled with reg iron — 21% Charged 15 hours 200 rate dischg 100 rate,

Center 99 Edge 114+114

4605 Dup of 4604

Center 97 Edge 112+112

4606 " "

Center 97 Edge 111+114

4607 " "

Center 97 Edge 110+112

4608 " "

Center 97 Edge 111+112

4613	447	513		483	505	513	493
12	425	450	~~44~~	457	450	450	443
11	433	505	~~448~~	483	507	506	492
10	442	513	~~457~~	490	480	506	492
09	433	508	~~447~~	490	487	483	483

4613	497	500
12	438	433
11	497	497
10	493	~~497~~
09	482	491

Anode Jars O.K. – W.E.H.

Done

4609 5 Reg. Nickels assembled & put in 21%. The irons are to be regular irons which have been made ANODE in 33% 15 hours 100 rate, against a Nickel Iron's—
Reg. Chge 1st Then Chg the irons 15 hours 200 rate & assemble with the Nickels Chg 15 hours 200 rate [illegible] 100 21% K.O.H.

Center 92 Edge 104 + 105

4610 Dup. of 4609
Center 94 Edge 104 & 105

4611 " "
Center 89 Edge 99 + 102

4612 " "
Center 88 Edge 101 + 102

4613 " "
Center 88 Edge 100 + 102

4618	467	497	495	523	477	185	493
17	479	500	499	528	494	208	497
16	473	489	495	516	479	192	487
15	473	488	496	525	480	186	467
14	495	497	497	525	480	185	490

4618	477	478
17	492	506
16	477	476
15	474	477
14	477	479

Reversals the most consistent on this group up to 2nd run

Reversals O.K. after 2nd run – W.E.H.

Done

4614. Group of 5 Reg 11 & Trans put in 21% in cells. The Charge 15 hours 200 rate discharge 100 rate to Zero, then put on Reverse 15 hours 200 rate then Charge 15 hours 200 rate & Continue this for 5 Cycles Then run reg several times (1e) Chg 15 hours 200 rate discharge 100 rate. This to see if Reversing is bad –

Center 88 Edge 95+100

4615 Dup of 4614

Center 90 Edge 102+103

4616 " "

Center 90 Edge 101+103

4617 " "

Center 92 Edge 101+104

4618 " "

Center 89 Edge 100+100

4623	72	75	75	64	58	73
22	82 115	77	111	67	62	83
21	78	101	100	90	103	101
20	147	78	108	67	64	79
19		132	108	97	106	103

4623	74	74	67
22	82	83	77
21	99	100	98
20	96	75	72
19	99	103	98

K_2CO_3 - O.K. - W.E.H.

Done

4619 — Group of 5 ni = Reg. Iron
Run in 25 per cent Carbonate
of ~~Potash~~ NOKOH Chg 15 hours 200 rate
dischg 100 rate
Center 89 Edge 100 + 102

4620 Dup of 4619
Center 89 Edge 100 + 101

4621 " "
Center 90 Edge 101 + 102

4622 " "
Center 90 Edge 100 + 100

4623 " "
Center 91 Edge 102 + 103

	1	9 hours chg 2	3	5	6	7
4628	477	501	350	365	358	337
27	475	491	392	412	415	387
26	477	498	430	449	450	475
25	478	497	333	350	350	342
24	472	498	373	398	400	378
	475.8	481.8	375.6			

	8	9	10	11	12	13	14
4628	341	333	320	340	343	350	332
27	346	333	365	383	387	380	382
26	442	442	465	450	444	450	425
25	360	332	322	337	325	350	333
24	393	392	367	392	340	393	398

Only Reg KOH put in up to 2nd run

465

K_2CO_3 O.K. after 2nd run - W.E.H.

	52 runs on endurance	66	68	69	50 runs on endurance	121	122
4627		328	352	323		232	233
26		417	433	408		300	325
24		357	380	352		267	263

KOH

Done

4624 Group 5 Reg Ni Reg Iron
Run in Solution 5% KOH, 15% Carbonate Potash.
Chg 15 hours 200 discharg 100
Center 92 Edge 103 + 105

4625 Dup of 4624
Center 95 Edge 105 + 102

4626
Center 90 Edge 102 + 103

4627
Center 90 Edge 103 + 104

4628
Center 92 Edge 104 + 104

	1	9 hour chg		3	5	4
4629	480	500		468	495	483
30	477	500		487	498	497
31	475	497		482	493	487
32	479	494		481	484	497
33	478	502		483	493	502
	477.8	496.6		480		

	7		8	9	10	11	12	13
4633	492		500	498	[illegible]	500	495	467
32	485		489	487	470	495	487	473
31	485		495	487	465	492	487	467
30	485		490	487	475	492	487	477
29	486		489	480	465	667	487	367
							440	

29 only Reg KOH used to 2nd run

K_2CO_3 O.K. after 2nd run. - W.E.J.

	14		5 runs Endurance	66	68	69	50 runs endurance	121	122
4633	497	x		545	504	500		500	500
32	475	x		533	510	493		508	487
31	472	x		532	515	493		518	498
30	487								
29	475								

Done

4629 Group 5 Ni Reg iron
Run in 10% KOH, 10% Carbonate Potash
Charge 15 hours 200 rate discharge 100
Center 89 Edge 97-101

4630 Dup of 4629
Center 89 Edge 101-101

4631 " "
Center 91 Edge 101-102

4632 " "
Center 89 Edge 101-[illegible]

4633 " "
Center Edge [illegible]

	1	3	4	5	6	7	8
4638	515	500	519	513	521	527	510
37	398	382	378	374	375	376	367
36	457	488	506	490	507	513	500
35	413	450	462	462	470	477	463
34	478	497	512	507	514	525	511
		[illegible]	474				

Without Carbonate ok

~~Only KOH [illegible]~~

	9	10	11		12	13	
4638	535	518	513	~~483~~	520	502	x
37	390	369	368	~~505~~	377	366	
36	522	493	497	~~495~~	500	490	x
35	487	467	467	~~4[illegible]3~~	462	455	
34	533	519	512	~~490~~	512	503	x

5 runs endurance

	65	67	68	50 runs on endurance	120	121
4638	554	500	493		467	467
36	550	487	478		458	457
34	565	509	500		500	483

Done

4634 Group 5 Ni Reg Iron

Run in 15% KOH 5% Carbonate Potash

Chg 15 hours 200 rate dis 100

Center [illegible] Edge [illegible] + 106

4635 Deep 4634

Center 88 Edge 98 + 100

4636 " "

Center 92 Edge 101 + 102

4637 " "

Center " Edge 106 + 103

4638 " "

Center 91 Edge 103 + 103

4643	65	84	106	106
-42	65	93	97	100
41	65	120	110	108
40	25	102	100	109
4639	65	90	120	111

Done.

4639 Group of 5 Ni. filled with the green hydroxide 30 mesh no grafite, Soaked 48 hours in bottle down stairs in 33% assembled in Reg cells - + CHARGE & DISCHARGE in 33% s
Center 96 Edge 107+111

4640 Dup of 4639
Center 95 Edge 108+109

4641 " "
Center 94 Edge 106+107

4642 " "
Center 95 Edge 109+111

4643 " "
Center 96 Edge 109+111

Silicious skeleton which made
Solution milky just like big
Cell plates [illegible] on removal in
KOH Hot)

4644 — String 10 inside & 10 outside
cups on iron wire, use this as
~~[illegible]~~ anode put 10 inside & 10 outside
on another wire make this the Cathode
put in 33% 150 Fahr 15 hours
100 rate ~~[illegible]~~ Stir them around
now & then so all get evenly coated
then hand jar to Edison —

I find the anode cups bright
but under microscope find they
are thickly coated with (brown)
burr like crystals insol KOH or
water all [illegible] hot water
& ~~[illegible]~~ not much by H_2SO_4 dilute
in HCl dilute. The Cathode
was badly coated with iron
which is oxidized to brown
& mixed in the bottom were the
same kind of burr like crystals

On a pair of strips in Nickel
beaker the crystals on Cathode
were larger & separate & in case
HCl gave silicious like skeletons
of the crystal (stated in Anode whole coat)
with some larger crystals gave

~~4645 – 5 ni made of anode~~
~~Caps. in 33% –~~
~~Req 3.2 ni. 21% chg 15 hours~~
~~200 dis 100. –~~
~~Center Edge~~

~~4646 Dup 4645~~
~~Center Edge~~

~~4647 " "~~
~~Center Edge~~

~~4648 "~~
~~Center Edge~~

~~4649 "~~
~~Center Edge~~

~~4650 - Group 5 Ni made with Cathoded cups~~
~~Run in 21% chg 15 hours 200.~~
~~rate during 100~~

~~Center Edge~~

~~4651 Dup of 4650~~
~~Center Edge~~

~~4652~~
~~Center " Edge~~

~~4653 "~~
~~Center Edge~~

~~4654. "~~
~~Center Edge~~

4659	55	192	183	198
58	85	223	223	222
57	75	200	197	194
56	40	163	172	168
55	72	197	198	206

Done

4655 Group 5 Ni with Green hydroxide, dipped 3 minutes in our regular Nickel Sulphate Solution Then dried, and put to Soak 120 hours in 33% down Stairs Then assemble with reg irons chg 15 hours 200 rate disch 100 - 21%

Center 99 Edge 108 & 101

4656 Dup of 4655

Center 107 Edge 114 - 116

4657 "

Center 103 Edge 112 & 114

4658 "

Center 104 Edge 112 & 113

4659 "

Center 100 Edge 104 & 109

	1	3	4	5	6	7	8
4664	442	524	518	521	525	526	507
63	440	513	517	478	513	511	500
62	413	520	542	502	512	512	496
61	445	521	527	[illegible]	529	524	507
60	[illegible]	523	527	515	522	522	510

	9	10			62	64	65		117	118
4664	512	515	x	600 runs of endurance	567	533	500	50 runs of endurance	533	523
63	512	508								
62	512	SC								
61	508	512	x		560	542	526		510	530
60	516	517	x		538	527	510		510	523

No 7

4660 - Group 5 Ni Reg mix dipped 3 minutes in our Sulphate of Nickel, ~~put~~ dried on plate then put to soak 120 hours in 33% down stairs in bottle. Then assemble & put in 21% Chg 15 hours 200 rate dischg 100 -
Center 91 edge 98 & 101

4661 Dup of 4660
Center 91 edge 101 & 102

4662 "
Center 91 edge 101 & 102

4663 "
Center 96 edge 101 & 105

4664 "
Center 90 edge 99 & 103

Jo1.4V.

	1	2		3	4	5
4669	426	477	~~465~~	467	463	467
68	470	522	~~46~~	500	500	497
67	471	513	~~490~~	495	492	490
66	467	508	~~512~~	490	493	497
65	428	518	~~502~~	471	493	473

	6	7	8		5 runs on endurance				50 runs on endurance	114	115
4669	457	460	473								
68	475	492	503	x			452	460		367	460
67	467	473	495	x		493	452	445		368	433
66	467	484	500	x		505	483	515		407	461
65	488	469	503	x		498	498	463		400	450

Solution While weep –

N07

Done

4665 = Group of 5 Nickels
assembled in Cells with
Mercury in bottom jar saturated
with Zinc, about 1/16 thick –
Charge 200 rate 15 hours dis 100
21% KOH, Connect mercury by glass plat
~~a nickel wire, of nickel~~ —|
Center 93 Edge 104 + 104

4666 Dup of 4665
Center 89 Edge 100 + 101

4667 "
Center 93 Edge 105 + 106

4668 "
Center 92 Edge 100 + 104

4669 "
Center 89 Edge 100 + 108

4674	522	510	517	508	517	528	512
73	519	490	513	507	516	528	505
72	516	490	505	496	506	507	493
71	523	490	517	515	521	527	510
70	523	514	513	507	516	527	500

4674	533	507
73	527	500
72	512	495
71	527	507
70	520	503

Treatment O.K. - W.E.H.

Done

4670 Group Reg Nickels —
Charge in 21% 15 hours 200 rate then take them off charge 15 hours, then put them on charge again for 15 hours off again 15 hours then Charge 15 hours & discharge 100 rate, This makes 3 charges & 2 rests —
Center 87 Edge 100 + 100

4671 Dup of 4670
Center 88 Edge 99 + 102

4672 "
Center 86 Edge 97 + 100

4673 "
Center 91 Edge 101 + 101

4674 "
Center 91 Edge 102 + 104

4679	497	499	500	506	519	511
78	492	495	498	499	514	507
77	495	503	505	505	512	507
76	497	507	505	507	516	508
75	487	502	500	505	512	500

Done

4675 Group 5 Nickels -
put in Convex one side flat
on the other - 21% Chg 15 hours
200 dischg 100
Center 97 Edge 82 + 83

4676 Dup of 4675
Center 94 Edge 83 + 85

4677 "
Center 98 Edge 84 + 88

4678 "
Center 96 Edge 89 + 90

4679 "
Center 96 Edge 90 + 89

	1	2	3	4	5	6	7
4684	475	505	522	523	517	550	532
83	472	500	517	552	565	548	532
82	470	500	513	548	565	547	530
81	457	508	519	~~530~~ 552	533	548	532
80	466	500	513	540	547	542	530
	477	502	517	543	545		

This is Reg Ni —
that given groups were transposed —

NO

	8	9	10		50 min on endurance	62	64	65	50 runs on endurance	117	118
4684	544	527	537								
83	544	527	533								
82	537	462	532	X		598	547	532		542	530
81	540	523	533	X		603	548	533		555	533
80	538	526	532	X		593	547	533		532	532

Probably were wrong as per Calipers

Done

4680 5 nickels with green hydroxide dipped 3 minutes in Ammonia Solution containing Chloride ammonia, in which Nickel hydroxide is dissolved, dried on plate. To be soaked 156 hours in 33% on hot plate [illegible], then assembled with regular irons Charged in 21% 15 hours 200 rate discharged 100

Center 92 Edge 100 & 103

Not crossed off

4681 Dup of 4680
Center 92 Edge 100 & 103

4682 "
Center 92 Edge 100 & [illegible]

4683 "
Center 92 Edge 101 & 103

4684 "
Center 92 Edge 101 & 103

4689	89	248	300	308
88	93	226	292	302
87	67	188	260	287
86	115	236	295	326
85	97	227	273	317

This is mixed
with 4685!—
They are [illegible]

See next page

187

Done

4685 Same as 4680 Except
Black nickel Reg mix used
Center 101 Edge 110 + 112

4686 Dup of 4685
Center 104 Edge 110 & 110

4687 "
Center 106 Edge 113 & 116

4688
Center 102 " Edge 111 & 113

4689 "
Center 103 Edge 112 + 113

4692	227	245
91	167	148
90	0	0 15 hrs

Co^{60}

Gamma

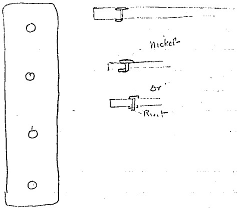
4690: Three packets from Gibbs batting, which were changed treated in 30% HCl solution for seven minutes then soaked in water, 3 hours water changed 3 times — to 62 put in grids ~~The [illegible]~~ + Charged 200 rate, 15 hours [illegible] 100 rate.

4690 Center 97 Edge 101

4691 Dup of 4690
Center 96 Edge 100

4692 " "
Center 97 Edge 102

4693 Group of 5 nickels
with rivets in lines - corrugated


nickel
or
Rivet

4694

4695

4696

4697

	1	2	3	4	5	6
4702	557	537	527	523	542	508
01	527	535	523	520	542	517
00	547	540	528	530	537	516
4699	576	543	532	520	532	512
4698	565	527	527	523	530	506

	7	8			60	62	63		115	116
4702		503		52 runs on Endurance				50 runs on Endurance		
01	517	514								
00	517	517	X		567	508	497		508	477
4699	512	505	X		542	513	499		522	500
98	512	506	X		558	512	498		518	500

Was a strip made - No - W.E.W.

1507

Dyer

4698 - 5 Reg Ni. 10 old irons - Change the 5 ni in 33% as anode + the 10 irons as Cathode 15 hours 100 Rate 150 Fahr [illegible] in same dish, then assemble in Cell 21% KOH Chg 15 hours 200 rate disch 100

Center 92 Edge 101 + 102

4699 Dup of 4698
Center 90 Edge 102 + 100

4700 "
Center 91 Edge 101 + 101

4701 "
Center 89 Edge 99 + 101

4702 "
Center 90 Edge 102 + 102

Irons

1	Center	80	Edge	92 + 92
2	"	80	"	92 + 93
3	"	82	"	91 + 91
4	"	81	"	92 + 93
5	"	81	"	93 + 90

4707	608	533	480	467	442	440	423
06	587	500	452	447	420	436	400
05	610	555	492	482	435	428	433
04	608	542	472	450	432	446	412
03	600	542	488	477	435	447	432
~~8~~							

Done

4703 - 5 Reg Ni only crimped
Smooth Concave dies 100 pressure
Reversed perforations -
Charged 15 hours 150 % of 100
rate then charged 15 hours 200
rate discharge 100 21% KOH,
Center 85 Edge 102 + 105

4704 Same as 4703
Center 84 Edge 104 + 103

4705 "
Center 85 Edge 106 + 104

4706 "
Center 86 Edge 104 + [illegible]

4707 "
Center 84 Edge 101 + 105

4712	482	475	476	474	447	449	
11	478	480	480	471	463	448	
10	472	467	463	460	433	443	
09	472	466	467	463	447	438	
08	473	468	453			432	

4712	427	428	433
11	428	427	428
10	418	414	418
9	415	414	417
8	422	428	433

Lone

4708 5 Reg Ni Reversed [illegible]
Crimped smooth [illegible] [illegible] 100 atmos
Charged 200 rate 15 hours discharg
100 rate no [illegible] 21% K.O.H.
Center 85 Edge 103 + 103

4709 Dup of 4708
Center 85 Edge 108 + 106

4710 "
Center 86 Edge 105 + 107

4711 "
Center 85 Edge 105 + 106

4712 "
Center 85 Edge 106 + 105

4717	423	494	493	473	487	483	
16	420	482	493	480	487	492	
15	421	489	490	472	488	493	470
14	425	489	490	480	485	493	471
13	422		492	485	500	495	483

~~15~~

4717	488	477	483
16	487	475	485
15		475	
14		476	
13		477	

4713 - 5 Reg nickels reversed perforations, in small cells. Containing 3 grammes of a concentrated Solution of Nickel in KOH 21%, Containing Citrate of Potash, - Reverse cold. 15 hours 200 rate Soak in fresh KOH 10 hours Then put in new potash, Chg 15 hours 200 rate disch 100

Center 92 Edge 103+103

4714 Dup of 4713
Center 93 Edge 102+103

4715 "
Center 93 Edge 103+103

4716 "
Center 94 Edge 103+102

4717 "
Center 94 Edge 104+105

4722	457	484	480	517	490	497	492
21	457	483	493	515	490	498	492
20	453	84	483	488	483	492	490
19	457	483	495	489	492	494	498
18	453	487	487	463	462	490	491

Dine

4718 Reg in group of 5.
Reversed perforation, Reversed hot
150 Fahr in FIVE percent KOH,
against Nickel strip, ~~[illegible]~~
~~[illegible]~~ 15 hours 100 rate,
~~[illegible]~~ Then assembled with Reg
Irons & Charged 15 hours 200
rate dischg 100 — 21% KOH
Center 91 Edge 103 + 102

4719 Dup of 4718
Center 87 Edge 102 + 103

4720 "
Center 90 Edge 101 + 104

4721 "
Center 90 Edge 102 + 103

4722 "
Center 89 Edge 102 + 104

	1	2	3	4	5		57	59	60
4726	490	498	217	513	505				
25	490	498	220	516	505				
24	486	497	219	517	505	x	548	520	511
23	483	497	212	509	[illegible]	x	533	523	511
22½	484	493	217	513	505	x	S.C.	517	S.C.

50 mins on Endurance

	112	113
4724	533	478
23	508	508
22½	510	487

1507

Dunc

4722½ Group 5 Ni Reversed 1507 Edw
Five percent KOH, 15 hours, 100 rate assemble
with Reg irons Charged 15 hours 200 rate
discharged 100 rate, 21%
Center 91 Edge 101 + 103

4723 Dup of 4722
Center 92 Edge 103 + 103

4724 "
Center [illegible] Edge 99 + 102

4725 "
Center 91 Edge 100 + 103

4726 "
Center 87 Edge 98 + 100

4731	597	530	505	5c	62	[illegible]	[illegible]
30	608	530	502	514	500	498	495
29	610	530	507	514	497	498	498
28	607	528	508	513	493	498	487
27	597	525	505	480	492	487	487

Line

4727 – Group Reg Ni [illegible]
Reversed perforations, Charged 15 hours in five percent KOH, 100 rate. ~~Then~~ 150 Fahr –
Then assemble with Reg irons
Chge 15 hours 200 rate dischg 100 rate 21%
Center 89 Edge 100 + 101

4728 Dup of 4727
Center 89 Edge 102 + [illegible]

4729 "
Center 90 Edge 101 + [illegible]

4730 "
Center 90 Edge 100 + 103

4731 "
Center 96 Edge 100 + 103

	1	2	3	4	5	6		50 runs on endurance	58
4736	604	543	520	507	527	512			
35	611	527	513	506	524	513			
34	622	538	518	511	530	511	x		540
33	618	5C	540	512	528	511	x		550
32	614	538	523	513	530	513	x		577

	60	61	50 runs on endurance	113	114
4734	492	479		485	467
33	507	497		488	478
32	514	499		500	483

N07

Don—

4732 Group Reg Ni Reversed perforations Changed in 5% KOH 150 tube 100 rate 30 hours 100 rate, then assembled Reg in cans & Changed 15 hours 200 rate discharged 100 — 21%
Center 90 Edge 102 + 102

4733 Dup 4732
Center 89 Edge 100 + 101.

4734 "
Center 87 Edge 101 + 100

4735 "
Center 90 Edge 104 + 103

4736 "
Center 89 Edge 103 + 101

1137 | 21[illegible] | 2133 | 2175

Sec[illegible]

4737 Done

Cage N 5 reg Ni wiht tils
on one side & 5 reg. irons
Charge 36 hours 200 rate per
pocket, [illegible] 100 Rate per pocket.
Thereafter charge 15 hours
200 rate per pocket [illegible]
100 rate per pocket.
Allow 21% —

4738	2242	2283	2133	2142	2175	1667	2067	
" 37	2183.	2167	2133	2175	2193	2125	2167	

4738	2084	1667	1333	2067
37	2084	1900	2000	2000

Done

4738 Cage of 5 Ni + Fe - Reversed perforations tit seperations Charge in 21% 30 hours 200 rate per pocket dis 100 rate per pocket Thereafter Chg 15 hours 200 rate per pocket dis 100 rate per pkt,

~~4739 = Old No 26 G10A endurance Cell - Reverse at 150 fahr 15 hours at 100 rate per nickel pocket, against Nickel strip. Then Change KOH and Charge regular 15 hours 200 rate, dischg 100 per pocket Then reverse again 150 fahr 15 hours 100 rate & Chg regular 15 hours 200 rate dischg 100 rate per pocket, Keep this alternate Reversing & charging until further notice,~~

Not Reversed yet

4742	368	53	317	315	192	
41	267	290	321	362	45	343
40	295	23	270	322	222	284
39	348	256	0	325	207	275

How was this manipulated

4742	300	314	
41	348	397	342
40	274	315	282
39	258	293	267

Done

4739 pocket from old Endurance Cell No 26 — to be reversed 150 fahr 100 rate in 21% 15 hours ~~[illegible]~~ in the little bottle — The bottle is to have the iron assembled with it ~~[illegible]~~ + used as anode in reversing. Then Chgd 15 hours 200 rate dischg 100 — Then alternately Reversed & Charge as long as it shows improvement Change KOH after each reversal

4740 — Other pocket from No 26

4741 " "

4742 " "

~~4743 Take 5 pockets Change~~
~~Rea in 21% 15 hours 200 rate~~
~~dischg 100. rate after~~
~~dischg give to Fred all to Calliper~~
~~& put a 1/16 hole at one end (lower end)~~
~~Use~~ ~~Callipering~~ ~~Each~~ ~~pocket~~
~~3 places on each side & 3~~
~~places in the middle then~~
~~put in 33 at high amperage to~~
~~gas all the mix out, after~~
~~all or nearly all out give~~
~~to Fred all to Calliper same~~
~~same places want to~~
~~see how much the cup~~
~~shrinks after it has swelled~~
~~by Changing —~~

~~4739 group of 10 Irons~~
~~old irons with do—~~
~~Made anode in 33% 100 rate~~
~~15 hours then assemble~~
~~with Reg. nickels~~
~~Charge 15 hours 200 rate~~
~~discharge 100 rate 2 hrs —~~
~~Center 88 Edge 100 & 100~~

~~4740 10 group of 4739~~
~~Center 88 Edge 100 & 103~~

~~4741 " Center 88 Edge 98 & 102~~

Changed to 4919

~~4742 — " Center 90 Edge 102 + 102~~

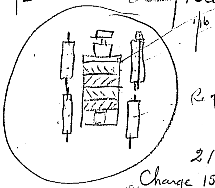
On account of Dup

~~4743 — " Center 92 Edge 103 & 103~~

4744	2106	2267	2300	2258	2317	2350
4744	2258	2317	2317	2208		

Done

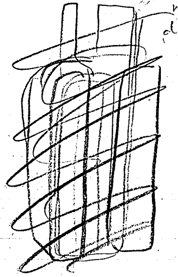
4744 Make a bird Cage Cell with 5 nickels ~~in~~ the Cage & use Scag 4 irons thus



Reg irons old

21% K.O.H.

Charge 15 hours 200 rate per pocket of Ni also 100 rate for pkt –



4749	402	50	404	420
48	412	407	389	420
47	408	407	385	413
46	410	415	397	417
45	387	413	377	400

Done

4745 Group Reg. Ni with green hydroxide 842 The 2 of grafite being Coarse grafite mixed only
Soak 96 hours 33%
on hot plate in [illegible]
Charge in 21% with old [illegible]
15 hours 200 rate dis 100
Center 95 Edge 106 & 105

4746 Dupe of 4745
Center 97 Edge 107 & 104

4747 " Center 96 Edge 107 & 106

4748 " Center 95 Edge 105 & 103

4749 " Center 98 Edge 106 & 108

4750 Reg Ni put in Cups
which were anode in 33%
at 150 Fahr - Iron got deposited
on Cham + now oxidized -
Charge 15 hours 200 Dis 100
in 21% —

4751 Dup of 4750

4752 "

4753 "

4754 "

4759	330	203	502	498
58	325	217	512	500
57	324	220	510	499
56	325	217	511	500
55	325	210	505	498

[illegible] they changing
[illegible] [illegible] [illegible]
or agree [illegible]

Cried + [illegible] both against
c.f. [illegible] [illegible] — W.E.N.

Done

4755 = Group 5 ni

Charge Reverse in 21% 150. Fahr 15 hours 100 rate, then Change at. 150 Fahr 15 hours. 200 rate discharge Capl. 100.

Center 92 Edges 104 & 105

4756 Dup of 4755
Center 91 Edge

4757 " Center 90 Edges 94 & 95

4758 " Center 89 Edge 98 & 101

4759 Center 89 Edge 98 & 98

4764	518	517	510	505	490	497	499
63	529	516	503	506	487	498	490
62	525	317	497	500	487	490	482
61	498	495	490	500	483	487	483
60	488	490	492	487	484	487	482

4760 — Group of 5 Nickels
Charge 3 hours 200 rate,
Rest 10 hours charge 3 more
hours rest 10, until you
have 15 hours charge in
then dischg 100 - 21% K.O.H.
Center 90 Edge 101 + 98

4761 Dup of 4760
Center 89 Edge 100 + 101

4762 "
Center 87 Edge 97 + 102

4763 "
Center 88 Edge 100 + 101

4764 "
Center 89 Edge 99 + 101

	1	2	3	4	5	6
4769	493	492	498	517	487	480
68	483	470	472	478	465	463
67	497	492	506	513	490	513
66	506	507	512	521	512	513
65	503	507	512	522	502	515
	497	493	500	510		

	7	8	9	10		52 Runs on Endurance	62	64	65	50 runs on Endurance
4769	510	492	484	500						
68	472	455	457	458						
67	515	488	498	487	X		540	517	507	
66	522	490	500	500	X		587	533	511	
65	517	493	501	500	X		577	528	511	
				489						

	117	118
4767	522	507
66	533	523
65	508	527

No 7

5)2445
489

Done

4765 - Group 5 Reg nickels
Use 21% KOH made from
Stick potash by alcohol
Chg 15 hours 200 rate
dischg 100 rate
Center 89 Edge 100 & 101

4766 Dup of 4765 —
Center 90 Edge 100 & 103

4767
Center 87 Edge 101 & 101

4768
Center 90 Edge 101 & 101

4769 -
Center 87 Edge 98 & 100

4770 Group 5 nickle -
Cups polished inside with
Emery paper to get any burned
scale off — Chg 15 hours 200
dischg 100

4771 Dup of 4770

4772 "

4773 "

4774 "

	#1	2	3	4	5		6 hr Runs on Endurance	#57	59
4779	495	497	513	507	510				
78	497	505	517	512	515				
77	499	501	517	510	515	X		5/53	497
76	496	506	513	510	512	X		557	492
75	501	507	517	512	515	X		553	505
	497	505	515	510					

	60	50 mins on Endurance	112	113
4777	498		507	492
76	490		510	495
75	498		507	492

1807

4775 group of 5 Reg Ni
Same as 4770 Except reversed
perforations made & cleaned
with Emery paper
Center 93 Edge 105+108

4776 Dup of 4775
Center 93 Edge 107+104

4777 "
Center 91 Edge 107+104

4778 "
Center 89 Edge 102+102

4779 "
Center 93 Edge 101+103

4781 B	1040
81 a	1046
80 B	580
80 a	577

(a + b) Done

4780 = Fe exp #42 R.a.

(a) (b)

S.L. # 3788 & 3789.

4. gms Fe

Run with 2 - 3.5 Reg hr.

1st	Ch	20 lbs	at 200	run	200
2d	"	15	" 200	"	200
3d	"	15	" "	"	200
4th	"	15	" " 200	"	500
5th	"	15	" "	"	500
6th		15	" "	"	500
7th		15	" "	"	200
8th		15	" "	"	200

	C.	S.	S
3788	77.	96	96
3789	76	74	74

#4781 (a & b) = Fe exp #44 R.a.

(a) (b)

S.L. No = 3790 & 3791.

4.00 gms Fe run with 2 - 3.5 hr ea. ch & run same as 4780.

21% K.O.N.

C	S.	S
68.	86.	86.

4786	0	0
85	0	0
84	0	0
83	0	0
82	0	0

No curve sheets for these – Came right down to 0.

4782. 5 Reg Ni in Methyl Propyl alcohol containing 21% of CP KOH dissolved. Charge 15 hours 200 rate discharge 100, Throw the Ions away when through with ~~test~~

Center 95 Edge 110 + 109

4783 Dup of 4782

Center 101 Edge 110 + 110

4784 "

Center 100 Edge 109 + 112

4785 "

Center 102 Edge 112 + 113

4786 "

Center 101 Edge 112 + 113

	5	
4791	5c	1
90	"	0
89	"	0
88	"	0
87	"	1

Cutout

No more shells for these - Came right down to 0.

3 2 6
32
3.3

Done

4787 - 5 Reg Nickels
in 33% Solution of formate of Potassium,
Chg 15 hours 200 ratio also 100
Center 91 Edge 103 & 105

4788 Dup of 4787
Center 90 Edge 99 & 100

4789 "
Center 90 Edge 102 & 104

4790 "
Center 90 Edge 102 & 104

4791 "
Center 92 Edge 103 & 105

4796	547	567	560	567	550	553	563
95	556	567	556	562	549	551	573
94	550	564	553	562	545	549	522
93	560	572	563	567	552	553	573
92	556	572	565	567	556	554	575
	553	566	558	563	550	553	561.

4796	555	565	555	562
95	554	549	552	555
94	552	547	547	555
93	550	552	555	560
92	565	560	563	565
	557	554		

5|2842
568

Weights wrong I guess

Siebig [illegible]

Mogwood

Dups

67

553

completion of something

from [illegible] which

green [illegible] days

[illegible] Oxygen Dilemma

4|2787
557

4|2770
554

4792 - group 5 Reg Nickels to be soaked in grain alcohol warm for 6 hours then dried & put in Reg 21% + Chg 15 hours 200 rate [illegible]
110

Center [illegible] Edge 111+112

4793 Group 6 4792
Center 102 Edge 112+113

4794 "
Center [illegible] Edge 111+111

4795 "
Center 101 Edge 113+114

4796 "
Center [illegible] Edge 113+112

4801	554	571	557	565	566	562	558
00	539	560	547	554	556	552	551
4799	555	567	557	566	566	565	564
98	541	557	539	552	557	552	553
97	533	552	535	545	533	544	544
	544	561	547	556	553	553	

4801	547	545	547	~~547~~	558
00	538	533	543	~~543~~	545
99	551	548	552	~~552~~	555
98	537	533	533	~~533~~	545
97	528	525	523	~~523~~	533
	540				

Overweight is
Causing big Capacity,

$5\overline{)2807}$
561

$5\overline{)2722}$
544

$5\overline{)2701}$
540

4797 – 5 Reg nickels
Soaked in CP Benzol.
for 6 hours, warm,
then dried & put in 21%
Chg 15 hours 200 rate, disch 100
Center 101 Edge 116 + 110

4798 Dup of 4797
Center 97 Edge 112 + 109

4799 "
Center 100 Edge 110 + 110

4800 "
Center 105 Edge 114 + 117

4801 "
Center 100 Edge 111 + 112

4806	~~490~~	504	505	512	492	500	497	
05	~~492~~	490	487	493	474	484	480	
04	~~500~~	492	497	500	478	489	489	
03	~~492~~	500	504	510	492	497	496	
02	~~518~~	492	497	500	486	489	489	

		59	60
4804	5 Drums on End	500	511
03		506	517
02		496	507

4802 5 Reg Nickels in 21% which has been heated 180 Fah 16 hours with 1/2 its bulk of shavings from a side guide rubber from 218 — Then Solution used in Cells — Keep KOH from Carbonating by using a bottle a letting it rest on asbestos on hot plate down stairs, need about 800 cc of 21% —
Chge 15 h 200 dis 100

Center .095 Edge 106 – 106
4803 Dup of 4802
Center .095 106 – 106

4804 Center .096" Edge 109 – 107

4805 Center .094" Edge 101 – 105

4806 Center .095" Edge 105 – 104

4811	503	503	508	483	490	487	15 Runs on End,
10	514	517	515	494	502	442	
9	501	503	508	482	492	488	
8	492	497	500	477	487	482	
7	504	507	510	487	496	492	

	59	60
4809	503	511
08	498	500
07	506	517

107

4807 – 5 Reg Ni put in Solution in which (800 cc) 10 Rubber packing rings (Soft) from E 18 has been heated on hot plate down 5 hours. The whole to be in a closed bottle glass stoppered — 15 hours — Use this solution in little Cells – Chg 15 h 200 rate dis 100

4808 Dup of 4807 [illegible] .025 [illegible] .02 106–104 107–109

4809 [illegible] .92" 106–107

4810 [illegible] 104–103

4811 [illegible] 108–105

							6 Runs on End	59	60
4816	512	507	543	533	526	512		498	507
15	455	452	500	465	443	445			
14	510	506	535	523	512	503		506	517
13	457	466	508	498	488	475			
12	493	493	503	525	512	505		500	508
	485	483	518	509	496	488			

107

Done

4812 5 Reg Nickels —
21% put in Each little cone
1 ~~[illegible]~~ gram mica [illegible]
Magnesium Hydroxide —
Alloy 15% 200 dia 100
Center 92 Edge 102 + 104

4813 Same as 4812
Center 87 Edge 97 + 98

4814 "
Center 95 Edge 103 + 101

4815 "
Center 91 Edge 102 + [illegible]

4816 "
Center 92 Edge 106 + 104

4821	0	0
20	0	0
19	0	0
18	0	0
17	0	6

Cut out

No curve sheets for these, - Came right down to 0

Done

4817 5 Reg Nickels -
Run in 33% Borax solution,
Chg 15 hours 200 dischg 100
Center 92 Edge 105 + 101

4818 Dupe of 4817
Center 91 Edge 105 + 103

4819 "
Center 91 Edge 105 + 102

4820 "
Center 91 Edge 101 + 104

4821 "
Center 91 Edge 102 + 102

4826	12	10
25	8	8
24	12	10
23	0	8
22	10	9

Cut out,

Done

4822 5 Reg Nickels -
Run in 33% Solution of Phosphate
of ~~Soda~~ Potash —
Chg 15 h 200 rate Dis 100,
Center 91 Edge 104 + 103

4823 Dup of 4822
Center 93 Edge 105 + 106

4824 "
Center 90 Edge 104 + 103

4825 "
Center 91 Edge 102 + 102

4826 "
Center 79 Edge 98 + 102

4831	0	Cut out,
30	0	
29	0	
28	0	
27	0	

All 5 nickels were before
Silica - Silica Rods
from Iron Carbon & Thermite
Difference in Result
frame Eaten —

No curve sheets for these - Came right down to 0.

Done

4827 - 5 Reg Nickels run in Solution of Water in which is dissolved 30% of Silicate of Sodium warm it to dissolve it
Chg 15 h 200 rate disch 100
Center 92 Edge 103 + 105

4828 Dup of 4827
Center 90 Edge 101 + 101

"
4829
Center 90 Edge 100 + 103

"
4830
Center 88 Edge 102 + 101

"
4831
Center 90 Edge 108 + 105

4836	0	0	Cut out
35	0	0	
34	0	0	
33	0	0	
32	0	0	

No curve sheets for these — Came right down to 0.

Done

4832 5 Reg nickels run in 33% Solution of Acetate of Potash or Soda —
Chg 15 hours 200 discharg 100
Center 90 Edge 101 & 101

4833 Dup of 4832
Center 92 Edge 104 & 105

4834 "
Center 92 Edge 102 & 111

4835 "
Center 93 Edge 102 & 101

4836 "
Center 91 Edge 101 & 101

4841	517	533	548	558	450 5	551
40	~~528~~	~~555~~	~~563~~	~~570~~	~~47? 5~~	~~566~~
39	~~530~~	~~553~~	~~563~~	~~573~~	~~557~~	~~567~~
38	~~525~~	~~556~~	~~563~~	~~567~~	~~553~~	~~562~~
37	520	550	548	562	565	557
	524	549	557	566		561

			60	61
4841	546	5 Runs on End		
40	~~554~~		561	570
39	~~565~~		560	567
38	~~552~~		558	563
37	548			
	553			

Swells Edge [illegible] normal sum
3
6
20
7

Center swells found
15
21
15
10
19
This wont great

Think more than 3.2 in
See Calipers 100 tip

4837. 5 Reg Nickels to be charged 15 hours at 200 rate & given to Edison after the charging — He will put them in large quantity Water until every trace of Potash comes out then they are to be put back in 21% & chgd again 15 hours 200 rate & discharged 100 rate
Center 100 Edge 112 & 112

4838 Dup of 4837
Center 97 Edge 108 & 110

4839 "
Center 100 Edge 111 & 113

4840 "
Center 102 Edge 11? & 115

4841 "
Center 101 Edge 112 & 114

4846	492	420	432	411	400			
45	419	486	507	475	478			
44	487	491	512	503	487			
43	492	483	507	494	487			
42	481	489	500	473	482			
	474	474	492	475				

4842 5 Reg Nickels
Reversed perforations, pressed flat to crimp — dont use the smooth Concave die or the Corrugating die — 100 atmos.
Charge 21% 15 hours 200 rate dis 100
Center 92 Edge 92 + 91

4843 Dup of 4842
Center 93 Edge 93 + 92

4844 "
Center 92 Edge 91 + 91

4845 "
Center 93. Edge 93 + 92

4846 "
Center 92 Edge 92 - 91

4851	511	514	545	540	523	523	SC	5 Burns on End.
52	505	512	533	532	518	517	532	
49	511	512	533	533	533	507	530	
48	505	512	452	533	535	523	513	
47	492	490	519	533	500	500	515	
	505	508	516	534			522	

	60	61
4850	514	519
49	512	519
48	513	517

$4\overline{)2090}$ 522

107

4847 – 5 Reg Nickels
Reversed perforations but
sent to phonograph works
and placed Receiver —
Charge 15 hours 200 rate dis 100
Center 94 Edge 108 + 109

4848 Dup of 4847
Center 93 Edge 107 + 107

4849 "
Center 95 Edge 107 + 108

4850 "
Center 94 Edge 107 + 107

4851 "
Center 93 Edge 105 + 105

4855½	493	497	503	497	510	500	
55	492	497	503	492	511	500	
54	493	498	508	500	513	517	
53	483	483	493	483	497	492	
52	492	433	504	487	497	493	

52 Burns on End.

	59	60
4855½	527	525
55	509	507
54	522	520

No 7

4852 5 Regni Reversed Perforations run in a 21% Solution 800 cc in bottle put in hot place 24 hours Containing 1/3 its bulk of ~~[illegible]~~ separators from Glen Ridge which are ready to go into cells or taken from an E 18 old cell over here — break them up in pieces 1/8 or better 1/16th long — molded Then fill the cells cells from this Solution —

Chg 15 hours 200 rate dischg 100

6. .094 Edge 106-104
4853 Dup of 4852
4854 .094 107-105
.093 " 104-104
4855 .094 " 109-105
4855½ .091 " 105-104

4860	507	499	449			
~~59~~	~~500~~	~~495~~	~~503~~	~~514~~	~~517~~	~~517~~
~~58~~	~~498~~	~~495~~	~~503~~	~~531~~	~~517~~	~~507~~
~~57~~	~~496~~	~~498~~	~~507~~	~~483~~	~~518~~	~~510~~
56	489	496	493	487	498	490

5w Runs on End.

	59	60
4859	505	512
58	498	504
57	500	510

107

4856 - Dup of 4852 - Reversed pag
Except the 800 cc of 21
has 1/3 its bulk of the
new separators Cut from
Sheets -

Chg 15 hours 200 discharge 100

Center .092 Edge 104-105
4857 Dup of 4856 -
Center .092 Edge 105-106

4858 Center .093" Edge 103-106

4859 Center .097" Edge 106-105

4860 Center .095" Edge 106-106

4865	493	489	504	533	519	514
64	500	492	513	530	532	528
63	485	493	498	537	515	512
62	493	500	503	533	517	514
61	495	503	505	538	517	518

5 on Burner End.

	59	60
4864	520	532
63	505	512
62	500	508

107

4861 Group 5 no Reversed perforation
Dup of 4852 Except 800 cc
21 has 1/3 the bulk of fine shavings
from the thin sheet rubber
used on sides of Can
Chge 15 hours 200 cls 100

Center .094 Edge 105-106
4862 Dup of 4861
Center .098 Edge 108-109

4863 Center .093 " Edge 105-105

4864 Center .097 " Edge 104-105

4865 Center .095 " Edge 107-103

4866 – 5 nickels made with the short cups — 2/3rds the length of Regs — Dies are at Glen Ridge or Silver Lake, see what they will hold if mix is called for about 85/100s in the center — Make special grids — Chge 200 rate 15 hours dis 100.

4867 Dup of 4866

4868 "

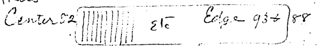
4869 "

4870 "

					57 Ruined	57	58
4876	508						
~~75~~	490						
74	479	505	506	505		497	508
73	413	487	437	435		473	483
72	461	433	426	417			
71		494	493	496		482	494
	470	479	478	475			

Cut this out
Feby 12th 1905

4871— get Rogers make 100 cups [illegible], from plain strip no perforations Then get a very fine chisel & Cut slots across 1/16 apart Thus—



Press & Crimp only with smooth Concave die — Have them nickel plated at phono works
Chg 21% [illegible] 200 rate dis 100

4872 Dup of 4871
Center 82 Edge 101+104

4873 "
Center 80 Edge 99+90

4874 "
Center 81 Edge 92+92

~~4875~~ Only four

4880	506	512	513	510	512	492	507
79	498	507	[illegible]	504	507	482	515
78	500	503	505	504	512	488	526
77	508	518	517	515	522	498	538
76	508	518	520	517	523	496	536
	504	511	512	510	515	491	

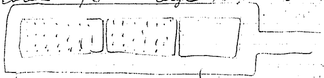
					59	60
4880	505	503	500	5th Runs on End		
79	498	500	490			
78	500	507	495		489	497
77	509	523	505		497	505
76	507	523	500		497	505

No 7

5)2456
491

4876 — 5 nickels made up of 3 sections use reversed perforations — use 1070 milligrams in each section thus

Center 93 Edge 10[illegible] + 106



bend the cups up by hand —
Run 21% Reg by C[illegible] 15 hours 200 rate discharge 100 —

4877 Dup of 4876
Center 95 Edge 106 + 103

4878 "
Center 93 Edge 104 + 106

4879 "
Center 94 Edge 107 + 104

4880 "
Center 96 Edge 108 + 106

4885	433	491	502	300	367	453	510	5 Runs on End.
84	~~433~~	~~490~~	425	~~300~~	~~400~~	~~474~~	~~500~~	
83	428	494	485	467	197	400	483	
82	417	490	460	~~4[illegible]~~	~~433~~	~~467~~	~~500~~	
81	432	[illegible]	510	[illegible]	77	320	457	
	428	493	476	383	295	419	490	

	60	61
4885	517	506
84	511	506
82	527	524

Done

4881- 5 Reg Nickels Reverse perforations, 2 grammes Gelatin dissolved in 21% KOH, for each cell— Chg 15 hour 200 rate dis. 100 Though worn away when through with run — Center 93 Edge 102 & 104

4882 Dup of 4881
Center 93 Edge 101 & 105

4883 "
Center 91 Edge 102 & 103

4884 "
Center 90 Edge 102 & 102

4885 "
Center 93 Edge 101 & 103

4890	491	452	500	462	452	467			
89	491	453	501	466	453	467			
88	493	448	500	457	443	466			
87	493	457	499	455	452	450			
86	493	457	500	453	443	453			
	492	453	500	459					

4886 - 5 nickels dry mix use no water, powder up Green hydroxide so all pass 100 mesh use 8+2 of the 2 parts of graphite use — one part recovered + put this in first then one part coarse. roll well. 3·2 Reversed perforations

Cups used. Charge 21% 15 hours 200 rate dis 100.
Center 99 Edge 110+109

4887 Dup of 4886 -
Center 100 Edge 111+110

4888 "
Center 99 Edge 110+110

4889 "
Center 100 Edge [illegible]

4890 "
Center 96 Edge [illegible]+109

4895	442	427	423	432				
94	442	427	425	425				
93	437	428	427	431				
92	436	423	421	429				
91	437	425	417	424				
	439	426						

4891 – Same as 4886 Except use only Coarse grafite ~~&~~ only mix it = dont roll, ~~the~~ The nickel hydroxide must be powdered 100 mesh fine – Chg 21% 15 hours 200 dis 100 Use reversed perforations.

Center [illegible] Edge 109 + 111

4892 Dup of 4891
Center 100 Edge 100 + 111

4893 "
Center 100 Edge 111 + 110

4894 "
Center 102 Edge 112 + 112

4895 "
Center 100 Edge 111 + 109

						57	58
~~4900~~	~~478~~	~~473~~	~~483~~	~~480~~	57 Burns on End	467	482
4899	472	458	450	457			
~~98~~	~~477~~	~~485~~	~~488~~	~~482~~		478	493
97	472	458	447	457			
~~96~~	~~470~~	~~473~~	~~490~~	~~478~~		472	483

No

4896 5 Reg Nickels 3.2
Put in Old C Cups 1250 holes
21%
Chge 15 hours 200 dw 100

Center .083 Edge .096-.099

4897 Dup of 4896
Center .088 Edge .097-.097

4898 Center .089 Edge .098-.099

4899 Center .084 Edge .093-.096

4900 Center .095 Edge .104-.103

					57	58
4905	478	487	492	475		
4	483	493	497	492		
3	478	488	492	485	480	492
2	477	488	492	484	487	492
1	483	487	487	483	472	482

53 Same on End

NO7

4901 5 Reg Ni - put in
Reversed perforations Old C
Cups 1250 holes, 21%
3.2
Chg 15 hours 200 dischg 100
Center .094 Edge .102 - .105

4902 Dup of 4901
Center .096 Edge .106 - .107

4903 Center .097 Edge .106 - .107

4904 Center .094 Edge .103 - .102

4905 Center .095 Edge .105 - .104

					5w Runs in End	57	58
4910	485	495	480	477			
09	485	497	492	484		487	496
8	487	500	497	492		504	509
7	410	500	497	491		497	505
6	497	618 s	498	458			

1107

4906 5 nickels put in
5000 hole Cups 3.2 21%
Chg 15 hours 200 rate dis 100

Center .094 Edge .103 – .106

4907 Dup of 4906

Center .093 Edge .104 – .104

4908 Center .091 Edge .101 – .103

4909 Center .088 Edge .100 – .098

4910 Center .094 Edge .104 – .106

					5% Burns on End	57	58
4915	458	487	487	473			
14	457	500	482	494		500	515
13	473	485	483	470			
12	480	492	487	477		480	495
11	473	486	487	461		480	493

4911 – 5 Nickels put in 5000 hole cups, Reversed perforation 3.2 21%

Chg 15 hours 200 rate dis 100

Center .089 Edge .101 – .102

4912 Dup of 4911

Center .094 Edge .103 – .104

4913 Center .089 Edge .098 – .099

4914 Center .093 Edge .103 – .103

4915 Center .092 Edge .101 – .102

4916 — | 364. | [illegible] | 396 | 394 | 394 | 392 | 385 —

4916 | 409 | 366 | 361

Done

4916 The old 157 pocket that
was busted on the side, the
mix is to be examined by [illegible]
under micro then taken out
dried well & put in new cup
with Reversed paraffine —
Chgd 15 hours 200 clock 100
21% —

c 87 c 94 + 97

4609 is to be done over again

4917a	47
4917B	48
4918B	333

Done

4917 a & b – 4.gm Fe mix = RaFe #40

a = 3795 S.L. cal - 72 – 89-87.
b = 3794 S.L. " = 75 – 89-87.
Assemble each with 3.5 gm Reg Mi-ble & run reg in 21%.

1st run. ch 20 hrs. @ 200 run 200
2nd " " 15 " @ " " 200
3rd " " 15 " @ " " "
4th " " 15 " @ " " 500
5th " " " " " " 500
6th " " " " " " 500
7th & 8 " " " " " " 200

4915 a & b – c 4.gm #38 Fe. RA.

a = 3792 S.L. cal = 69-84-83.
b = 3793 S.L. " = 67-85-85.

charge & run same as 4917.

4923	509	525	510	513	522	528
22	523	525	522	517	520	529
21	508	517	505	505	513	520
20	505	507	497	500	500	514
19	500	510	502	487	503	513
	509	518.8	507	505	511	521

					62	63	
4923	510	519	512	52 Runs on End			
22	508	515	513				
21	502	499	500		514	525	
20	495	493	495		498	508	
19	490	499	510		506	523	
	501	506	504				

5)2526
504

5)2594
518.6

5)2545
509

Done

4919 Group of 10 Irons
Old irons will do
made anode in 33% 100 rate
15 hours then assemble
with reg nickels
Charge 15 hours 200 rate
discharge 100 21%
Center 88 Edge 100 + 100

4920 Dup of 4119
Center 88 Edge 100 + 103

4921 " "
Center 88 Edge 98 + 102

4922 " "
Center 90 Edge 102 + 102

4923 " "
Center " Edge 103 + 103

4928	487	512	506	497	498	525	517	508
27	488	514	503	505	497	525	512	507
26	486	513	505	497	497	525	512	508
25	486	510	503	505	497	525	517	508
24	[illegible]	510	503	505	483	487	483	485
	486	512	505	502	490	513	508	

					64	65
4928	508	500	497	52 Burns on End		
27	508	500	498		505	518
26	508	500	498		500	516
25	510	500	499		506	520
24	500	483	488			

Done

4924 group Reg Ni Reversed perforations, 21% KOH, put in the little cell. 2/grammes Sulphate of Potash. Chg 15 hours 200 dis 100
Center Edge 102+103

4925 Dup of 4924
Center 90 Edge 99+101

4926
Center 91 Edge 102+103

4927
Center 90 Edge 101+102

4928
Center 91 Edge 102+103

4933	392	442	432	433	447	425	427	427
32	395	432	412	400	405	390	387	388
31	383	436	428	432	443	425	427	428
30	365	420	414	412	423	406	407	409
29	300	322	290	254	271	267	262	247
	367	411	397	383	398	383	382	383

Dmc

4929 – group of 5 nickels with clamps that are crimped by a Die that only works on the Edges. 100 atmos –
Charge 21% 15 hours 200 rate dis 100

4930 Dup of 4929

4931

4932

4933.

Closed mat for Cal

4938	463	480	495	467	463	495	5 Runs on End.
37	463	487	283	292	300	367	
36	[illegible]	478	475	467	458	467	
35	[illegible]	494	493	500	464	495	
34	465	440	463	472	464	493	
	463	486	431	439	425	464	

	59	60
4938	499	507
36	493	500
34	498	507

Dons

4934 5 Reg nickels reversed perforations, 21% KOH Containing 5 grammes of CYANATE of Potash (not cyanide)
Charge 15 hours 200 dis 100
Center 90 Edge 101 + 102

4935 Dup of 4934
Center Edge 104 + 105

4936
Center 89 Edge 103 + 103

4937
Center 91 Edge 103 + 103

4938
Center 94 Edge 101 + 105

4943	27	24	25
42	18	17	24
41	26	17	17
40	27	16	17
39	22	17	20

Cut out

[illegible]

4939 5 Reg nickels reversed perforations. Electrolyte 20% Solution of CYANATE of Potassium [not cyanide]
Chg 15 hours 200 dis 100
Cent. 92 Edge 103+105.

4940 Dup of 4939
Center 92 [illegible] 102+104

4941 "
Center 93 Edge 104 & 105

4942 "
Center 92 Edge 101 + 102.

4943 "
Center 93 Edge 101 104

4948	455	491	500	502	483	507	5 w Rims on End	59
47	455	498	507	502	467	497		505
46	[illegible]	487	507	502	486	465		467
45	457	487	506	502	493	497		500
44	462	500	510	502	493	507		
	457	492	506	502	485	494		

	60
4948	521
47	485
46	518

Done

4944 5 Req Nickels. in 21% (Reversed pets)
Containing 3 grammes of Sugar
Chq 15 hours 200 rate dis 100
Centr 11 Edge 103 + 103

4945 Dup of 4944
Centr 91 Edge 102 + 103

4946 " "
Centr 93 Edge 102 + 105

4947 " "
Centr 94 Edge 103 + 105

4948 " "
Centr 92 Edge 102 + 104

4953	480	512	518	503	494	500	
52	450	512	517	503	497	505	
51	473	500	509	503	485	491	
50	477	508	513	498	496	500	
4949	[illegible]	510	515	503	500	507	
	477	508	514	502	494	502	

Done

4949 5 Reg nickels Reversed perf - 21% Containing 3 grammes Tartarate Potash
Chg 15 hours 200 dis 100
Center 88 Edge 101 + 101

4950 Dup of 4949
Center 91 Edge 102 + 102

4951 "
Center Edge 103 + 103

4952 "
Center 88 101 + 102

4953 "
Center 94 Edge 103 + 105

4958	400	390	367	367	367	367	344
57	330	293	271	277	267	279	250
56	[illegible]	258	230	267	221	230	200
55	300	258	[illegible]	257	229	240	200
54	[illegible]	323	305	314	300	310	291
	334	304	282	298	277	283	257

					63	64
4958	353	247	345	5 Runs on Each	233	300
7	240	249	247		190	185
6	200	185	193			
5	257	242	214			
4	290	295	240		238	267
	268	243	238			

Done Careful about this

4954 - 5 nickels. Reversed perforations. Cups made with new 5 To inch corrugations No smooth die used. but only one pressure used & that with new die.

Press. 5 — atmospheres. 21% Chg in 200 dis 100

Center 112 110

4955 Dup of 4954

Center 119 Edge 114 & 111

4956

Center 116 Edge 110 + 110

4957

Center 114 Edge 110 + 110

4958

Center 114 Edge 109 + 109

4963	433	420	416	407	412	40[illegible]	488
62	382	355	333	323	322	[illegible]	293
61	443	429	[illegible]	423	432	424	408
60	448	432	417	420	425	417	400
4959	417	343	306	307	308	300	259
	424	396	378	376	63 360	371	369

4963	392	397	380	52 Runs on Sand	S.C.	333
62	292	287	282			
61	430	419	400		382	392
60	SC	410	392		382	392
59	267	267	260			
	345	354	341			

Done

4959 Dup of 4954 with
10 Atmospheres
Center [illegible] Edge [illegible] 110

4960 Dup of 4959
Center 115 Edge 110 + 114

4961
114 Edge 115 + 110

4962
113 [illegible] 112 + 115

4963
112 [illegible] [illegible] 112

4968	482	463	483	479	477	479	461
67	482	463	485	480	477	482	463
66	377	287	282	125	56	33	23
65	430	419	426	420	416	421	400
.64	451	453	462	452	451	450	466
	444	417	427	391	449		447

					63	64	
4968	462	461	458	2 Runs on End.	433	452	
67	463	467	457		489	452	
66	251	22 nt	22 nt				
65	405	409	398				
64	433	438	428		422	433	
	410	445	435	5			

Done

4964 Dup of 4954
but with 20 atmospheres
Cond [illegible] [illegible] 105 + 107
113

4965 Dup of 4964
Cond [illegible] [illegible] 105 + 107

4966 "
114
114

4967 "
114 [illegible] 105 + 112
115

4969 "
113 [illegible]
114

4973	490	488	500	497	500	497	486
72	440	415	393	377	348	333	320
71	488	487	497	492	495	463	473
70	508	494	502	500	501	505	492
69	447	415	417	404	400	404	388
	474	459	462	63 449 4			432

4973	475	484	467	5th Runs on End.	467	492		
72	315	313	310					
71	477	464	475		467	488		
70	498	500	492		492	507		
69	422	392	380					
	437	434	425					

Done

4969 Dup of 4954
But with 40 atmospheres
Center 114 Edge 110 & 111

4970 Dup of 4954
Center 113 Edge 108 & 109

4971 "
Center 115 Edge 110 & 105

4972 "
Center 112 Edge 106 & 107

4973 "
Center 114 edge 110 & 112

4977	503	~~500~~ 507	513	508	511	513	498
76	513	488	500	489	492	497	498
75½	457	439	442	440	433	433	463
75	480	484	481	477	472	472	463
74	458	450	[illegible]	428	422	416	408
	462	473	476		466		466

					63	64		
4977	500	507	497	5th Bunsen End.	499	502		
76	482	490	482		483	500		
75½	427	428	420					
75	463	428	457					
74	400	465	393		398	420		
	454	463	450					

5) 2336
466

Dmi

4974 Dup of 4954
but with 80 atmospheres
Center 110 Edge 108+108

4975 Dup of 4974
Center 110 Edge 10[illegible]+108

4975½ "
Center [illegible] Edge 105+107

4976 "
Center 110 Edge 107+108

4977 "
Center 109 Edge 105+108

4982	507	496	513	512	512	511	507
81	498	496	510	508	508	506	498
80	[illegible]	513	527	521	525	527	513
79	[illegible]	518	531	527	529	532	528
78	[illegible]	487	495	494	496	502	488
	[illegible]	502	515	512	514	516	507

					63	64
4982x	505	517	503	5th Run on End	512	514
81'x	504	509	498		500	520
80x	513	524	513		516	533
79	518	527	517			
78	490	497	487			
	506	5.154	503			

5|2562
512

4
5|2534
507

Done

4978 Dup of 4954
but with 160 atmospheres
Center 102 Edge 102 + 101

4979 Dup of 4978
Center 102 Edge 101 & 101

4980 "
Center 104 Edge 102 & 103

4981 "
Center 102 Edge 100 + 101

4982 "
Center 102 Edge 101 & 102

								59
4987	467	497	499	503	464	496	5% Runs on end.	497
86	474	508	512	503	497	505		523
85	465	497	506	504	492	500		
84	472	499	506	504	492	500		515
83	473	500	506	503	458	497		
	470	500	506	503	491	499		

	60		
4987	513		
86	540		
84	527		

4

Done

4983 5 Req Ni Reversed [illegible]
21% Continuity 5 grms Citrate Potash
Ckg 15 h 200 |dia 100 -
Center 92 edge 102+103

4984 Dup of 4983
Center 93 edge 104+104

4985 "
Center 92 edge 101+103

4986 "
Center 93 edge 101+105

4987 "
Center 93 edge 102+101

4988

New 5 Corrugation ~~to~~ inch die — made 5 grids at different pressures weighed them then soaked in water hot for 1/2 hour — following results

Atmos	orig weight	Weight with water	difference	%
5	14005	14960	965	23
10	14205	15120	915	22.2
40	13765	14570	805	20%
60	14275	15075	800	20%
120	13670	14400	730	18%

	Calliper
5	112
10	112
40	114
60	113
120	108

Note should have been put in a vacuum to get gas out.

4989	834
4990	47

4989

S.L. #3795 Cal 73 - [illegible]
4 gm Fe #41 R.A.
Assemble with 2 - 3.5 gm Ni Reg.
Cle & run reg or an Fe.
i.e. 2 runs at 200
3 " " 500
2 " " 200

4990

3[illegible] Cal 73.-83-90
Dup. of 4989
& run same.

4991	500
4992	434

4991

S.L, #3796 Cal 64-87-86
4 gm Fe #43 RQ.
Chg run as reg Fe same as 4989

4992

S.L. #3797 Cal 67-85-86
Dup of 4991 chg & run same.

Recovery

4997	324	193	146	129	92	89	76
96	322	213	162	[illegible]	105	99	92
95	323	230	157	132	95	90	88
94	323	143	155	65	45	47	43
93	255	119	73	52	35	38	37
	309	179	138	103	74	58	68

Only the Solution new pkts 2nd Run –

						13	14	
4997	73	467	467	463	467	71	262	200
96	85	463	467	433	488		321	197
95	82	420	45[illegible]	373	343	377	367	92
94	44	468	46[illegible]	463	489	498	267	230
93	36	473	435[illegible]	465	578	528	320	263
	64	47[illegible]	467	439	461	458	293	194

Was it due

2n

After this Run 2 grms KCl put in +

4993 group is now new Ni + Fe but old Solution from 4993 group to see if 1st Nickels Exhausted)

see the aluminum –

3rd

4997	532	541	422	137	[illegible]	560	555	573
96	556	521	233	133		567	562	584
95	533	467	367	161		562	562	587
94	538	532	50	251		567	565	585
93	538	576	424	261		582	567	588
	16	17						

Done

4993 – 5 Reg Nickels
21% KOH, with 500 Milligrams Metallic aluminum dissolved in liquid in little cell
Reg Nums –
Chg 15 hours 200 dis 100

99-101 4th run

Center 95 Edge 103 + 104
New Ni 91 103 + 103
3rd Ni 93 101 – 103

4994

99-99 4th

Center 91 Edge 100 + 102
96 107
93 102 – 103

4995

104-101 4th run

Center 89 Edge 98 + 99
92 102 + 103
93 102 – 104

4996

101-101 4th

Center 58 Edge 99 + 101
95 107
93 104 – 103

4997

Center 89 avg Edge 100 + 101
104 + 105
102 – 103
102 – 104

572	577	595	584	597	578	593
573	586	590	590	600	581	585
550	574	595	574	600	542	547
560	588	597	587	605	564	585
576	592	567	593	600	584	593

5002	350	268	183	152	109	102		
1	368	266	153	150	150	59		
00	353	250	170	140	102	99		
4999	368	250	175	175	110	100		
98	352	230	136	100	63	45		
	361	253	170	140	107	87		

5002 to
2nd 4998 – Run again with 3 grams of KCy in the 21% —
Marked 4998A etc

5002	A	462	467	467	263	333	300
01	A	370	378	350	274	283	~~245~~
00	A	378	399	390	SC	SC	250
4998	A	140	225	240	263	66	72
		348	367	362	266		

3rd
Change the Solution + put Reg KOH in
B

Done

4998 Dup of 4993
Except 250 milligrams metallic aluminum dissolved in Cell —

Center 92 Edge 102+103

4999
Center 91 Edge 101+104

~~4~~5000
Center 90 Edge 101+102

5001
Center 90 Edge 101+101

5002
Center 95 Edge 102+104

5007	346	38	255	150	106	106	66
6	400	35	332	243	192	142	135
5	407	26	316	242	186	138	12.0
4	400		345	245	209	153	122
3	[illegible]		326	226	155	139	122
	[illegible]		315	221	176	134	113

176

Done

5003 Dup of 4993

Except 125 milligramm Metallic aluminum dissolved in little cell –

Center 91 Edge 100 + 101

5004 Center 92 Edge 100 + 102

5005 Center 93 Edge 103 + 103

5006 Center 90 Edge HCl

5007 Center 89 Edge 100 + 102

5/12	430	423	360	300	242	220
11	365	332	277	242	353	189
10	444	438	375	332	280	297
9	437	430	372	325	277	273
8	440	447	393	340	323	315
	423	414	355	314	295	259

Done

5008 Dup of 4993
Except 62 milligrammes
Metallic aluminum dissolved
in Cell

Center 97 Edge 107 + 116

5009
Center 86 Edge 97 + 97

5010
Center 92 Edge 101 + 103

5011
Center 90 Edge 103 + 104

5012
Center 89 Edge 100 + 100

5017	466	483	447			403
16	472	498	480	[illegible]	464	455
15	443	458	429	405	397	398
14	465	475	453	434	422	414
13	462	480	449	437	415	410
	461	479	451	444	420	416

4)1753
438

Done

5013 Dup of 9993
Except 31 milligrams
Metallic aluminum
dissolved in Ccl

Center 95 Edge 104+105

5014
Center 92 Edge 102+102

5015
Center 93 Edge 102+102

5016
Center 89 Edge 101+102

5017
Center 90 Edge 100+103

5022	477	497	476	472	467	457	~~457~~
21	492	442	425	414	407	400	~~40[illegible]~~
20	477	503	487	486	480	462	~~467~~
19	468	~~500~~	467	495		✗	~~464~~
18	472	500	487	486	479	464	~~464~~
	467	484	472	459	456	445	

4)1833
456

Dave
5018 Dup of 4993
Except 16 milligrams
aluminum dissolved in Cell
Center 89 Edge 99+101

5019
Center 90 Edge 101+105

5020
Center 88 Edge 101+102

5021
Center 89 Edge 99+102

5022
Center 86 Edge 97+97

5027	[illegible]	514	505	507	505	498	
[illegible]		513	505	507	505	499	
25	[illegible]	525	510	513	512	508	
24	[illegible]	517	506	500	505	500	500
23	[illegible]	525	508	512	511	506	508
	486	519	507	508	507	502	504

5/2533
507

1st Run

Mlg	[illegible]
500	309
[illegible]	364
125	391
62	423
31	461
16	457
8	496

Done

5023 Dup of 4993

Except 8 milligrams Aluminum dissolved in Cell

Center 94 Edge [illegible]

5024 Center 90 Edge 99+102

5025 Center 90 Edge 100+[illegible]

5026 Center 90 Edge 101+100

5027 Center 90 Edge 102+103

5032	407	459	486	491	505	512
31	402	443	477	473	499	500
30	407	459	486	490	302	507
29	387	452	463	483	500	514
28.	383	437	471	468	494	500
	397	450	481	481	460	506

52w Runs on End.

	59	60
5030	492	500
29	507	527
28	496	513

Delution Red

Done Reversed perf

5028 5 Rag Mi with 21%
Containing 2 [illegible] of [illegible]
Chq 15 hours 200 dur 150
Center 91 Edge 100 + 102

5029
Center 91 Edge 100 + [illegible]

5030
Center 91 Edge 103 + 105

5031
Center 92 Edge 103 + 104

5032
[illegible] 92 Edge 100 & 104

5037	464	458	463	457	467	477	462
36	500	500	505	498	509	512	496
35	503	503	510	498	515	517	493
34	486	490	493	491	499	500	483
33	505	510	516	503	521	518	497
	492	492	497	489	502	505	

57 Runs on Ends

	60	61
5035	492	506
34	478	492
33	491	505

June Reversed perforations

5033 — 5 Reg Nickels, 21%
The solution [illegible] 2' [illegible] [illegible]
falling [illegible] [illegible], cut about 1/8
square [illegible] 100
Center 90 Edge 103 + 104

5034
Center 90 Edge 101 + 102

5035
Center 91 Edge 103 + 103

5036
Center 91 Edge 101 + 102

5037
[illegible] 90 Edge 101 + 102

[illegible]

5042	102	262	353	419	433	398
41	196	315	383	432	431	463
40	112	255	320	395	350	433
39	110	279	343	415	423	440
38	196	323	387	440	445	467
	143	287	357	421	422	5

57 Runs on End,

	59	60
5041	422	445
40	395	428
38	423	443

Solution of Flowers of [illegible]
" [illegible] "

5038
5039

5/220
440.

Done Reversed [illegible]

5038. 5 [illegible] 21%
Containing 2 [illegible] in
each cell —
Chg 15 hours [illegible]
Center 90 Edge 100–103

5039
Center 92 Edge 103 + 105

5040
Center 91 Edge 104 + 101

5041
Center 91 Edge 101 + 101

5042
Center 96 Edge 105 + 106

5047	440	475	472	520	482	482	5w Runs on End.
46	433	470	463	487	470	477	
45	452	489	485	475	490	490	
44	458	491	482	494	483	492	
43	437	471	462	467	470	475	
	444	479	473	493	479	483	

	59	60
5045	515	520
44	521	523
43	498	500

Done Reversed Perf.

5043- 5 Reg Nickel 21 [illegible]
Containing 2 [illegible]
Hypophos [illegible]
[illegible]

Center 89 Edge 100 + 102

5044
Center 95 Edge 106 + 106

5045
Center 92 Edge 103 + 104

5046
Center 91 Edge 103 + 103

5047
Center 91 Edge 104 + 103

5052	490	498	513	500	498	505	500
51	487	494	507	492	492	497	498
50	487	497	508	508	493	499	500
49	474	487	489	483	480	467	492
48	467	487	490	484	480	482	488
	481	492	501	493	490	494	495

52 Runs on Ends

	60	61
5052	506	510
51	498	498
50	506	513

Done Reversed polarization

5048 5 Reg Ni. with 21% Containing 3 grms precipitated (fresh) Carbonate Lime Chg +5 hours 200 rate des 100
Center 93 Edge 104+104

5049
Center 91 Edge 101+105

5050
Center 91 Edge 101+102

5051
Center 91 Edge 102+103

5052
Center 92 Edge 102+104

5057	494	503	512	508	506	500	500
56	494	503	512	512	507	497	500
55	465	474	485	487	477	492	483
54	493	506	517	514	507	500	500
53	492	500	508	507	500	499	500
	487	497	507	505	499		

				5th Runs on end.	63	64
5057	500	510	500		495	497
56	531	512	500		493	493
55	498	480	466			
54	531	514	507		492	495
53	531	513	499			

Done Reversed perforation
5053. 5 Reg Nickels with 21% Containing 2 grammes of freshly precipitated Carbonate Barium —
Chg 15 hours 200 lbs 100
Center 91 Edge 103+101

5054
Center 92 Edge 105+105

5055
Center 91 Edge 102+103

5056
Center 95 Edge 105+104

5057
Center 92 Edge 103+104

5062	483	486	493	492	489	455	492
61	533	507	558	562	557	547	550
60	533	547	554	558	555	549	560
59	533	543	552	546	545	533	550
58	540	551	561	563	556	550	560
	522	527	543	544	540	535	542

					63	64
5062	513	495	485	5 Runs on End.	494	496
61	562	514	[illegible]			
60	577	558	550		550	552
59	556	545	555		526	523
58	519	~~510~~	500			
	546	518	522			

Big Callipers My figures

Reexamined [illegible]

5058 5 Reg Nickels with 21% with 2 grammes freshly precipitated Carbonate Magnesia Chg 15 hours 200, dis 100
Center 99 Edge 112 + 112

5059
Center 99 Edge 113 + 113

5060
Center 100 Edge 112 + 112

5061
Center 97 Edge 110 + 110

5062
Center 92 Edge 106 + 106

4812. is duplicat 1 gram Mg

5067	483	498	505	500	492	498	498	5 w Runs on End,
66	482	493	505	499	488	495	498	
65	482	481	500	494	490	497	498	
64	485	494	513	492	495	505	503	
63	455	472	482	467	467	467	467	
	477	489	501	491	486			

	60	61
5066	483	492
65	497	511
64	502	514

Done Reversed perforation

5063 5 Reg nickels with 21%
Containing 2 grammes Magnesia Hydroxide
Chg 15 Hours 200 rate dis 100
Center 87 Edge 103 + 102

5064
Center 91 Edge 104 + 101

5065
Center 95 Edge 10[illegible] + 106

5066
Center 93 Edge [illegible]

5067
Center 90 Edge [illegible] + 100

5072	384	265	192	163
71	392	270	192	145
70	357	243	183	133
69	367	265	187	133
68	387	277	200	145
	377	264	191	143

5)1887
377

This shows Iodides are bad without Mercury

Done Reversed Carefully

5068 5 Regular Nickels with Irons that have no Mercury in iron — 21% use new jar Tops Containing 3 grammes of Iodide of Sodium — nothing that has mercury etc
Chg 15 hours 200 dis 100
Center 93 Edge 103 & 105

5069
Center [illegible] Edge [illegible] & 105

5070
Center 90. Edge 102 & 101

5071
Center 94 Edge 103 & 102

5072
Center 89 Edge 99 & 105

5077	442	387	333	300
76	438	375	317	275
75	433	383	318	267
74	446	400	332	300
73	422	377	317	276
	436	394	323	283

5)2181
436

Done

5073 Dup of ~~[illegible]~~ 5068
Except one gramme of
Iodide of Sodium in the 21%
use nothing that has Mercury in
or has been used

5074
Center 90 Edge 108+104
Center 90 Edge 102+104

5075
Center 93 Edge [illegible]

5076
Center 92 Edge [illegible]

5077
Center 93 Edge 104+107

5082	366	233	167	133
81	367	244	187	133
80	377	218	163	130
79	392	267	228	163
78	414	267	175	164
	379	246	182	144

5) 1896
379

Dons

5078 5 Reg Ni with Irons ~~that~~ have no mercury in
Use 21% Containing one gramme
of Aluminum dissolved in it
use everything new—new top, keep mercury [illegible]
Chg 15 hours 200 dis 100
Center 90 Edge 102+105

5079
Center 92 Edge 103+105

5080
Center 91 Edge 100+102

5081
Center 92 Edge 104+106

5082
Center 92 Edge 104+105

5087	444	367	314	56
86	429	367	300	222
85	437	365	290	223
84	442	372	314	261
83	440	365	300	255
	438	369	303	242

Done

5083 — Dup of 5078
Except 1/2 gramme aluminum
use new jar etc Everything new
so as to keep Mercury away —
New Top —
Center 91 Edge 101 + 102

5084
Center 93 Edge 102 + 102

5085
Center 92 Edge [illegible]

5086
Center 90 Edge 10[illegible] + 102

5087
Center 91 Edge 99 + 102

5092	506	517	525	529	518	515	510
91	510	521	531	533	527	518	517
90	500	524	533	541	532	525	528
89	495	477	460	460	455	450	452
88	497	520	530	522	516	518	505
	501	502	518	522	511		

			61	62
5092	503	52 Run on End	507	518
91	517		516	533
90	524		530	532
89	482			
88				
	502			

Done

5088 5 nickels big Corrugations
Corrugated 200 alutosphere
21% Chg 15 hours 200 Dis 100
Center x Edge [illegible]

5089
Center 102 Edge 99 + 97

5090
Center 100 Edge 99 + 100

5091
Center 103 Edge 100 + [illegible]

5092
Center 102 Edge 99 + 100

5097	467	500	521	526	519	513
96	493	526	538	542	533	525
95	482	519	532	538	531	523
94	446	464	524	537	531	524
93	467	512	537	544	537	531
	471	504	530	537	530	

			52 Runs on End	61	62
5097	517	511			
96	530	516			
95	528	520		522	533
94	527	523		524	527
93	532	528		528	538
	527	519			

Done

5093 Dup of 5088 21%
Except 250 atmospheres'
Center 102 Edge 98 & 100

5094 Center 101 Edge 98 & 100

5095 Center 99 Edge 99 & 98

5096 Center 101 Edge 99 & 101

5097 Center 100 Edge 99 & 101

5102	470	507	528	537	522	514	515
01	423	428	452	200 out		SC	500
00	462	506	531	537	530	522	515
5099	337	372	471	540	533	522	525
98	475	521	537	542	533	527	528
	473	467	504	539	529		

		52 Cure on End.	61	62
5102	512			
01	508			
00	522		519	523
5099	523		518	520
98	525		527	525
	518			

$5\overline{)2590}$
518

Done

5098 Dup of 5088 2-1 %
Except 300 Atmosphere
Center 98 Edge 96 + 97

5099
Center 98 Edge 97 + 97

5100
Center [illegible] Edge [illegible] 97

5101
Center 99 Edge 97 + 98

5102
Center 98 Edge 98 + 97

5103	393
04	467

5103 Fe.

SL # 3800 $\overset{C}{75}$ $\overset{E}{87+90}$

BQ #45, 4 gm Fe.

assemble with 2 - 3.5 gm Li

ch. 200 mm 200 heat 2 mins —

" " " 500 3rd 4th + 5th mins.

" 200 " 200 6th + 7th "

5104 Fe.

S.L. # 3801 $\overset{C}{75}$ $\overset{E}{90+91}$

Dup of 5103

ch + heat same

5107	30	180	155
6	[illegible]	130	208
5	[illegible]	167	167

#5105

new.   Cal – [illegible] $\overset{c}{}$ $\overset{\varepsilon}{}$

3.2 mm plain fused 100–100. Pyroph.
Crucible with 2 changed F[illegible].
Run at 100 with no change.
Then at 200 & ann 100.

#5106
Dup of 5105 – Cal — $\overset{c}{\overline{80}} - \overset{\varepsilon}{\overline{89 - 90}}$

#5107.
Dup of 5105 Cal — $\overset{c}{\overline{79}}$ – [illegible] $\overset{\varepsilon}{}$ 90

5112	467	455	466	466
11	400	367	351	380
10	453	429	427	433
9	462	454	437	475
8	467	455	442	467

Done

5108 5 Reqni Dry mix
8&2 — 1 part grafite (recovered)
put in first, the recovered,
then after rolling well
add the ① coarse grafite —
press with big Corrugation
die 40 atmosphere @ 21%
Chg 15 h 200 dis 100
Center 101 Edge 93+94

5109
Center 102 Edge 96+97

5110
Center 101 Edge 93+95

5111
Center 101 Edge 95+97

5112
Center 102 Edge 94+95

5117	481	462	467	467
16	475	462	467	467
15	478	462	467	467
14	482	466	467	467
13	487	466	467	477

5113 Dup of 5108
Except 80 alumina
Center 94 Edge 89+89

5114 center 94 Edge 92+92

5115 Center 96 Edge 98+98

5116 Center 94 Edge [illegible]

5117 Center 92 Edge 91+91

5122	495	477	467	482
21	495	475	467	478
20	502	484	467	477
19	498	484	471	485
18	497	485	471	485

5118 Dup of 5108
Except 160 atmos
Center 89 Edge 84 + 85

5119
Center 86 Edge 83 + 84

5120
Center 89 Edge 85 & 86

5121
Center [illegible] Edge 83 & 84

5122
Center 86 Edge 83 & 83

5127	497	462	477	466
26	498	482	470	486
25	480	472	467	475
24	499	490	477	486
23	502	477	465	475

5123 Dup of 5108

Except 200 atmos
Center 83 Edge 80 + 81

5124
Center 87 Edge 82 + 84

5125
Center 81 Edge 80 + 81

5126
Center 85 Edge 81 + 82

5127
Center 87 Edge 83 + 84

5132	501	486	470	483
31	505	486	470	482
30	506	467	483	466
29	479	334	467	475
28	498	486	483	492

5128 Dup of 5108

Except 250 atmos
Center 88 Edge 81 + 82

5129
Center 85 Edge 80 + 82

5130
Center 85 Edge 78 + 81

5131
Center 82 Edge 78 + 78

5132
Center 81 Edge 77 + 79

5137	473	460	445	470	467
36	497	491	478	487	492
35	507	492	479	487	493
34	507	496	477	487	492
33	502	496	481	490	492

5133 Dup. of 5108
Except 300 alnico
Center 81 Edge 74+77

5134
Center 81 Edge 77+78

5135
Center 83 Edge 77+78

5136
Center 85 Edge 79+82

5137
Center 82 Edge 77+79

4

432
430
12960
1728
185,76

175
25
875
350
4375

5

175
2
350

256
20
5120

256
22
512
512
63

256
25
1280
512
6400

Iodide old 4477
" new 5073

Al old ½ gr 4993 – 4458 [illegible] 33
4453-Rq
new 5078